

15,000 YEARS OF HUMAN TRAILS IN THE LAKE MANIX BASIN

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ABSTRACT

Aboriginal trails permeate the shoreline of the Lake Manix Basin, some emanating from the chalcedony beds near the Calico Early Man Site. This paper examines the patterning of trails in the vicinity of the Pleistocene Lake Manix shoreline and poses the possibility of the trails dating in the vicinity of 15,000 years B.P. It also follows foot and wagon trails in the same area and attempts to differentiate among them.

Introduction

When the aboriginal people of the Mojave Desert had the desert to themselves, they had an extensive system of trails. I can still find traces of them. They had networks that they used in their daily living and longer ones that went from one water source to the next water source. These longer trails we now call trade trails. Most of these trails have now been destroyed by modern man in his quest to develop and occupy the land. First the homesteaders came in and cleared land and cultivated it. This started the destruction. Then with the advent of off road vehicles, man has driven into every corner of the desert, just to do it. The two actions have destroyed most of the trails that were here just a few years ago. Now, only a few of the trails are left that can be followed for more than a short distance. When I first started to study the trail in this paper, about 24 kilometers of it could be followed. Now much of what I first found has been driven over by motorcycles and destroyed. Some also has been destroyed by the flooding of washes. When I first started, parts of it, at that time, were so dim I could only follow it under the best of conditions. There are parts of it that are still plain and visible, and can be followed by most people. I believe I have walked on, or only a step or two off, most of the distance I have mapped. It has been a real challenge to find all of it, and it has taken time. I have tried to look hard, understand, and be as truthful about what I have found as I can be. I have stated what I think I have found, and I hope, with luck, to be right most of the time. Naturally, I have been wrong part of the time. I hope I haven't been very far off.

Several years ago the Archaeological Survey Association of Southern California was asked to help on a surface survey, around the Calico Early Man Site, in the Calico Hills. The site was going to be listed on the National Register of Historic Places and needed a buffer area around it for its protection. This made the survey necessary to learn and record what was in the zone. The buffer area was plotted on a map, and then cut up into small workable sections. A number of volunteers worked on it before the job was completed. One of the crew members found a trail while working a section, and included it in the findings. I was asked to go and check it in the hopes

that enough on it might be visible to go into the report. This was my introduction to the trail.

The trail was found about a kilometer east of the Early Man Site. It was running around the slope of a hill that had two little watercourses, dips, running down off of it. The slope is a rocky west facing one and the trail runs generally northwest and southeast across it. The trail is very visible in the rocks. On the north end, it runs over a gentle ridge and down to a flat sheet washed area, turns west and fades away as it goes down the wash. On the south it goes over another gentle ridge and down into a little larger watercourse, and makes an 80 degree turn to the east.

Now human trails normally do not make 80 degree turns, in three steps. My first thought was, there's a fork here. So, I tried hard to find a trail down the watercourse. I could not find any sign of a trail. The trail is real visible as it runs down the hill, makes the turn, and runs east up a rocky hill. The trail makes the turn. I will make a guess as to why it does this later in this paper. It runs up the rocky hill, over a saddle and down into a little valley. There is a classic fork in the valley. A trail goes south and one goes east. I looked at them and decided to go east. It was a good choice. The trail south runs down the valley, out on to the flat and fades away.

As I went east across the valley most of the trail is easy to follow. All trails are interesting for me to follow and here I was on one that looked like it might go places. At the east edge of the valley the trail goes over a saddle, and down into a watercourse that runs north northeast, or a heading of about 20 degrees. A small group of motorcycles had come up the valley, crossed the saddle and gone down the same watercourse. I believe it was a small group, because when they were on the trail they messed it up but did not destroy it. I could still tell a trail was there. They were off of it as much as on it down the watercourse, so that helped. When the hills end, there is a slope, generally down to the north, from the hills down to the more level desert. The trail runs down this slope as a straight path through the creosote. This is a visible path that can be seen for some distance. It looks very much like the trail was there first and the creosote grew up to it. The motorcycles

locked onto this path and rode down it to Jade Hill, about 3 kilometers away. The trail was messed up with the tracks on it, but most of the way I could tell that it was there. At the northwest side of Jade Hill a trail forked off to the north. I tried to follow it, but it faded away before I could even guess where it might go. When the main trail is around Jade Hill, it angles more east and takes a heading of 40 degrees, and runs out to the section line road, about a kilometer away. On this heading I was looking at Spanish Canyon, maybe 10 kilometers away. When I reached the section line road I had walked about 7 kilometers. I recorded the trail. It has the site number of CA-SBr-1613.

The trail crosses Bragdon Road on the section line and goes across the corner of the section on the east and runs to the road on the north side. Here the trail is a clear path through the vegetation. On the north side of the road, I ran into the homestead. It looks like about half of the section was cleared. I took a careful check on direction and landmarks, and drove around the cleared land. I was right on. The trail was there and just barely visible, as it came up to the road on that side of the section.

Across this road I ran into my first real problem in following the trail. Here I am on what Dr. Meek terms a Beach Ridge complex (Meek 1990). From here east to the outlet of Pleistocene Lake Manix the Mojave River, in its meanderings, after Lake Manix went dry, deposited this beach ridge. The soil is very light and has not held any of the normal trail signs. All I had to follow was a path through the vegetation. As I went along on it I noticed that there was a fine grass growing on it, that was higher than the grass beside it. We had a small amount of rain that spring. The higher grass was the best trail sign that I had to follow. I told a college agriculture student about it one summer, and he told me why it happened. He told me that when there is just some rain, the compacted soil of the trail will hold the moisture the longest. This gives the grass on the trail more time to grow, so it will be the highest. When there is more rain all of the grass will be the same height. Even with this higher grass and path it was very difficult to follow the trail to the playa.

These were the best conditions I have ever had, to follow the trail across this beach ridge. Most of the time I am not right on it. When I reached the playa I was on a little hill, maybe 5 or 6 meters above it. As I came over the brow of the hill, and the playa was in full view, the higher grass forked. A trail angled off to the south. I stood there and looked at it and couldn't believe it. A shoulder ran out from this high area into what was once the lake. I followed my straight ahead trail down and off of the north edge. The fork bothered me, so I went back and looked at it. Then trail sense told me that higher grass was a fork that went down and off of the south edge of the shoulder. It was a big help for me to know it right then. It saved me from confusion later.

When I went around the northwest edge of Jade Hill, and the trail took the heading of 40 degrees, I was looking at the general area of the mouth of Spanish Canyon. This encompassed a rather broad area. My trail experience told me that the

trailwalkers went straight. As I continued to work my way east, toward the playa, I wondered about what I was looking at. If they were going right at Spanish Canyon here, then surely they went there. I knew that there was a trail in Spanish Canyon, but it was a good distance away, maybe 6 kilometers from the playa. Were they the same trail and could I follow this trail that far and tie them together? I knew that there would be places where it would be very difficult. I knew that there would be a lot of history in it if I could. I thought it over and decided that if there was anyway I could do it I would do it. With this determination I went to work. I was to find out I would need that determination.

I was completely stopped east of the playa. One of the motorcycle races to Las Vegas must have started right there in the playa. Everything east was tracks, tracks and more tracks. They went to Spanish Canyon, and then up it. It was a real trauma for me to go through as I tried to find the trail. My direction didn't help because they both went to the same place. I spent a long time looking for it without any luck. Then I received help from a lady who had walked trails with me a long time ago. I was taken to a piece of the south trail that was visible, up in the middle, that unlocked all of the rest of it for me. Without her help, I might never have found all of the trail, from the playa to Spanish Canyon. In Spanish Canyon it was not hard. I was between walls, and enough trail was visible to follow it.

I had found this trail on the west end and followed it going east. I knew that to see the trail best and gather all of the detail I needed, I had to work west, into the sun. I started the detail work from "Impassable Pass" which is the top of Spanish Canyon, down. Out of the canyon the trail turned southwest and was ideal to walk in the afternoon, into the sun. This way I could recognize everything I could see, and help tell the trail and tracks apart. Everyplace I could see the trail I drew a solid line. In a few places I put in dotted lines, because I knew that the trail went there, but had been destroyed (see maps).

Relevant Geology (After Byers 1960)

Alvord Mountain is a broad upwarp of the pre-Tertiary crystalline rocks, the elevation of which was probably accompanied by some vertical uplift along a marginal fault at the south edge of the range. The Tertiary layered rocks on the eastern flank of the Alvord Mountains are arched into a broad anticline that plunges eastward from the pre-tertiary granitic and metamorphic rocks. The Alvord Mountain upwarp is further complicated in the area underlain by Tertiary rocks by the subsidiary Spanish Canyon anticline, whose axis curves from north to west, and by many minor faults, the largest of which are northeast-trending normal faults that dip southeast. The northeasternmost part of the Alvord Mountain upwarp is broken by two east to northeast-trending fault zones, which may merge westward under alluvium to form the southern boundary fault of the Alvord Mountain upwarp.

A former surface, partly erosional and partly depositional, on volcanic gravel is now being dissected in the southern part

of the quadrangle. This surface probably extended to the northwestern part of the quadrangle in early Quaternary time, prior to renewal of the warping and faulting that produced the present arrangement of mountains and playa basins. The Alvord Mountain upwarp and other areas of pre-Tertiary crystalline rocks have been maturely dissected. Small stream washes are well adjusted to the structure of the Tertiary layered rocks, but a few larger washes appear to be a stream that was established before local uplift began and incised its channel at the same rate that the land was rising. Spanish Canyon is probably one of these.

The area to the south of the Alvord Mountains is a building fan. It is probable that the uplift in the Alvords has aided the fan building. As the land rose it speeded up the flow of water out of the canyons and washes, so that the alluviation was more complete. Down close to the playa the rate of drop in the washes slows up. It takes a hard rain to get water there now and when the water gets there it has lost most of its alluvium.

The playa is the Coyote Lake arm of Pleistocene Lake Manix. According to Meek (1990:xiv-xv), "The final lake in the Afton sub-basin was terminated by rapid incision of Afton Canyon sometime between 13,800 and 13,300 years B.P. The maximum late Wisconsinan stage of Lake Manix, 24,000-10,000 years B.P., was approximately 543 meters (1781 feet) above sea level." At this level Lake Manix overflowed into the Coyote basin. This stabilized the level of Lake Manix. Coyote lake has a level of 520 meters (1707 feet). During this period of time the Pleistocene was still in progress, so there was a good flow of water in the Mojave River. Following the draining of Lake Manix, the Mojave River delta remained active throughout a long interval which continued to about 9,000 or 8,000 years B.P. Until 12,300 and possibly 11,300 years B.P. the delta shifted into Coyote basin and was responsible for one or more deep lakes there. This was long after the remainder of the Manix Basin had drained and was dry. It is noteworthy that the deep lake in Coyote basin at 12,500 years B.P. corresponds with a low lake in the Silver/Soda Lake basin.

West of the playa is the area that was the delta after Lake Manix went dry. This delta extends for almost 7 kilometers. All across this area the elevation stays very even, with the exception of Jade Hill in the corner of T11N section 31 and T10N section 6, R3E. This would be an indication of water action. It is possible that at times the hill was an island, and so was an anchor point. There is a beach here that has been dated at 11,000 B.P., and a delta dated at 12,000 B.P.

In the northwest corner of the Harvard Hill Quadrangle Map, in section 12, T10N, R2E the trail enters the Calico Hills. The Calico Hills are about 25 kilometers northeast of Barstow, and about 5 kilometers north of the Mojave River. The hills are high-level dissected alluvial fans. The present desert temperatures reach 46 degrees C in summer and -14 C in winter. Mean annual precipitation is 108 mm. most related to winter cyclonic systems. However, local convective precipitation occurs in summer, occasionally producing flash floods.

The hills range in altitude from about 600 to 730 meters. The oldest rocks are mainly Mesozoic volcanics that are mostly intruded and overlain by igneous and lacustrine deposits. Sediments are now separated from their source area in the Calico Mountains by younger alluvial fans, many of which are bounded by apparently active faults. The Calico Hills comprise mainly highly dissected fans, underlain by Tertiary lacustrine sediments.

Manix Basin Prehistory

It is believed by some that the earliest occupation of the New World could be as much as 180,000 years ago. I am open on this point. I do believe that it was before most researchers will state a public opinion on. There probably will have to be two finds made that will be much the same date and will back each other up. Then opinion will start to change. Different researchers have given different names to the phases of what is believed to be the earliest human occupation. Naturally the first one, the Pre-Paleo-Indian, or Malpais, or Cobble-Core Tradition is poorly documented. Traditionally the next phase has been termed the Paleo-Indian, Playa, or Lake Mojave/San Dieguito phase. This is followed by the Milling phase. The last is the Shoshonean or late Prehistoric phase. There is evidence that all of these cultures were present, during their time frame, in the Mojave desert (Kaldenberg 1981).

It is very possible that the early cultures obtained some of their food from gathering. The overall climate being cooler and more pluvial, the vegetation would have been entirely different then it was later. This different vegetation could have produced food in a form that didn't require any preparation to be ready to eat. The hunt for this vegetation and food could be a factor in the need for trails, to go to where the vegetation and food would be. There had to be a reason why the people moved from one area to another. At that time, there should have been enough game in an area for them to have hunted. So, it seems that another reason for them to move is possible. Then as the climate changed, the food changed, and that changed led to the need for milling. The milling technique would have developed as the need for it developed. The change in the food supply made it necessary to use the trails a great deal. The human feet using the trails over a very long period of time beat them into the soil so firm that they have lasted until the present. When we can still find them, it shows that they were used heavily for a very long time.

Local History

The foot trail eventually grew into the Old Spanish Trail, that in turn became the Mormon Road to Salt Lake City. The earliest Spanish traders with their mules were following the foot trail in 1830 when they entered the Manix basin. On November 8, 1829 Antonio Armijo, with sixty men, left Santa Fe for San Gabriel Mission (Walker 1986:269-270A). These traders used mules to carry their trade items. So, after they had travelled over a trail it was a mule trail. To go directly from Santa Fe to San Gabriel they would have had to pass through areas controlled by hostile Indians such as the

Navajo, Apache, Hopi and Mohaves. So, to by-pass them they circled to the north through country occupied by the Utes. By using that route they created a problem for themselves. From southern Utah on they didn't know the country well enough to locate water. They kept scouts out in front of them searching for water. When they located it they would move to that water, and then wait for the scouts to find the next water. They would have had scouts out some distance ahead to save precious time. Even then, it was a long trip of 84 days. On the return trip they made the journey in 56 days.

They travelled through the Manix basin from January 19 to 21, 1830. They would have followed Indian trails every time they went in the correct direction. They followed a well known Indian trail to Bitter Springs, then on to the Alvord Mountains and down to the mouth of Spanish Canyon. There they left the trail and went more south to the nearest water, the Mojave River. Then they joined the Mohave Indian trail and continued. The foot trail went to the river but made a gentle arc a little to the north. The mule trail that they made immediately became known as the Old Spanish Trail (Walker 1993). The name was not complete; it should have been known as the North Fork of the Old Spanish Trail. The culture and the language along this trail changed from principally aboriginal Indian to Spanish until the advent of constant American usage later in the 19th century.

The foot trail was followed from Bitter Springs into and down Spanish Canyon (see Map). Outside of the canyon the trails separated. The traders and their mules went more south to the river and the wagon road went with it (von Till Warren 1981).

The Mormon Battalion was called up for duty in the Mexican War. At the end of the Mormon enlistment on March 14, 1848 they were disbanded (Roberts 1919). They collected their pay and on 21 March a company of 25 men under Captain H.G. Boyle returned to the Salt Lake Valley. They had with them 135 mules and a light wagon. While in southern California they had seen productive agriculture fields which they did not have in Utah, so they brought a light wagon loaded with these products back with them. They put the first recorded wagon over the trail and it went from west to east. The track that they made became the Mormon Road to Salt Lake City. Where the terrain allowed, the wagon went down the mule trail. At times the wagon had to leave that narrow trail to find appropriate terrain. In Spanish Canyon the two trails diverge several times.

When they diverged, the foot trail went more in an west/southwest direction or 240 degrees and crossed into the Alvord Mountains at Section 14. It continued on to Section 31 in the north central edge of the section. There is meanders around the north side of Jade Hill. On the west side of the hill is a definite trail fork. A trail comes in from nearly due north and merges into a single trail. This trail heading north faded out so quickly that I could not tell where it went. Once around the hill the main trail bends more to the south and goes into the Calico Hills that are to the northwest. It enters a canyon, crosses a divide and briefly continues west. The canyon turns

almost south and the trail turns and goes with it. At the westernmost point, where the canyon turns south, a trail forks off and trends west. The main trail continues down the now broad canyon almost south. As the trail goes on across the flat it has a very slight curve to the west. As it goes down the slope it becomes dimmer. When the surface becomes flat the trail is gone. I was approximately 20 meters from Benchmark 92WFM 1896 in Section 26 immediately north of Interstate 15. The trail ended here after approximately 24 kilometers.

Walking the Trails

I walk the trail and record the detail I see as I go along. Several parts of the trail are so dim that it is necessary to use all of the sun to its best advantage to see it. Luckily this trail ran correctly to walk it into the sun from east to west. After leaving Spanish Canyon, the general direction of the trail is southwest. Looking into the sun the outline of the trail is much easier to see than looking away from it. All of this detail was recorded in the afternoon when I could look into the sun and see everything I could. The trail has been run by motorcycles a big part of the way. Looking into the sun helps me tell a trail from a motorcycle track. I can see the little things about it better. A human trail will be clear in the center and feather out to the sides. It will not be absolutely straight. It will go right at a distant spot, like a canyon, but it will make small little irregularities as it goes along. The human foot doesn't walk in a straight line. They make small ins and outs, most of the time less than the width of the trail. They will give the feathered edge a look all its own. This is a human trait, we still do it. Also, an old trail will have erosion in it. Looking into the sun helps me see this. In places where water could collect in it and run, the trail will have a distinct dip in the center. Where the land drops a little and the trail goes down it, there will be a clear dip of erosion as the trail drops. If it goes into a wash there will be clear erosion where it goes in or out. This erosion is important to look for. It's a sure way to tell an old trail from a new track. There can be an exception to this. It is possible for water to have washed the erosion away. If you don't see erosion, look hard and think; could this have happened here? The trail and the track are about the same width, 35 to 40 centimeters. A track will stay close to that width. A very old trail may not be that wide. Wind and water will wear them down.

A motorcycle track will have straight edges. They seem to run in strings, one behind the other, so they leave a clear center with almost a straight edge. Once in awhile one motorcycle will run on the edge and it won't be clear, but normally this is not for long. So if the trail is real straight and the line between trail and surface beside it distinct, it is a motorcycle track. On a stretch of desert pavement the motorcycles will displace the rocks that they run over. There will be many with wrong sides up and some rocks in the trail. The trailwalkers apparently moved the rocks aside on their trails, so there is a clear difference in desert pavement. Also, a motorcycle track will not have erosion in it. Out here, the motorcycle track is much too new to have had erosion take place. At times a track will make a turn to a new direction. A human trail does not do

this. When the only way you have to travel is to walk, you go as straight as you can. There are times when using every bit of knowledge I have, it was still very hard to tell a track from a trail. I have had times when I had to walk a track or trail for some distance before I could be sure of what it was. That is why I walk into the sun so I can see everything that is there.

There are several things a person needs to know to follow a trail any distance. Light and direction are the most important. If the trail runs right use the sun all you can. I know that many times this cannot be done. A dim trail will not show if the sun is at your back, or high overhead. If possible use the winter days when the sun is low. If you can't, and the trail is visible enough to line up the direction, get to where you can see some trail in front of you. Then look ahead at anything that is in line, that you can keep sight of. The trail will go right at it. This direction is very important. If you follow it closely it will take you across an area where the trail has been washed out by water. When you reach a surface that will hold it, the trail will be a step or two, one way or the other. If there is vegetation, look for a path through it. Most vegetation has not grown back on the compacted soil of a trail so this path will show in most good light. There are conditions when some vegetation will grow back on the trail, but it will be different from the vegetation beside the trail. Many times the trail itself will be gone, but if you can follow the direction and lack or change of vegetation you can tell where it was. This will be where the surface is a light soil. I have found one exception to this. Here on the desert, there is a fine grass that grows when we have rain. There are times when this is a big help. The higher grass and the path through the vegetation make the trail more visible. Observe everything around the trail as you go slowly along. There are times when the light isn't right and you can take three or four steps off to the side of the trail, away from the sun, and see it better. Look for any change in the ground surface. Sometimes, when looking into the sun, a very dim trail will have a slightly different color or look. This should be the trail. Also, there will be less gravel and smaller rock in the trail than beside it. If I know I am on a trail, I can follow it across places where it is so dim, that I could walk across it and never see it. I might see something that I think might be trail, but if I don't know it is I don't call it one. At times the edge, where feet pushed the gravel out will be the last part of the trail visible. Go slow and try to see everything. Speed up only when the trail is plain. At times I will call the trail a braided trail. A braid is where the trail separates and there are two trails side by side. They may be only a step or two apart, or several steps and sometimes much more apart. Once in awhile they are so far apart that they are like two different trails. When they are, I wonder if there wasn't a reason for it that just isn't apparent to us now. If I can I will state the distance. When I state that I have the trail or road firm, I mean that I can see it at that place. (Where I have firm trail I will enter it on the map as a solid line. Where the trail has been washed or rubbed out and I can't see it, but know that it went there, I will enter it as a dotted line.)

I will start the two trails and road at the top of Alvord Mountain East Quadrangle Map, 7.5 Minute Series, in Section 20 Township 12 North, Range 4 East. In the northwest corner of the section, right on the east west section line, a wash runs south out of a U in the contour line. This is the north end of the road in Spanish Canyon. From the bench mark at the intersection of Sections 19, 20, 29 and 30 Township 12 North, Range 4 East, it is due north to the north edge of the section, then just east. The three tracks that I studied for this paper are separate and visible here. It might be the only place where the three tracks, the old foot trail, the mule trail and the wagon road are separate and still visible. Spanish Canyon runs from north to south, and is seven kilometers long. Most of the floor is a flat wash. In a steady or hard rain this wash collects and runs water. This is a normal watercourse that moves back and forth across the canyon floor. This flow of water has washed out a good part of the road and trail. The wagons would have looked for the firmest ground they could find to run on, so they tried to stay out of the bottom of the wash. The road is visible now only where it is up away from the bottom. The wash would have become very soft with use so to save the animals the wagons would have tried to stay up on firmer ground. Both the road and trail would have cut across every bend to save distance, so where the terrain is right, and they are separate, the road and the trail can be found close together.

I will not map the trails north of Spanish Canyon. From the top of the ridge north there has been considerable modern vehicle activity, both two and four wheel types. I can only follow the foot and then the mule trail for perhaps 30 or 40 meters, then they become iffy. I think I can see where they went, but its just an educated guess. I think that they joined the wagon road out about 200 meters north of the top. The wagon road is now a vehicle road and gets driven a little, so its plain. The road heads north on a heading of 36 degrees. A section north is the boundary of Fort Irwin and that's off limits, so I didn't try to go farther.

At the ridge that is the north rim of Spanish Canyon the three trails are not more than 100 meters apart. The foot trail was the first one there so I'll start with it. When I look at it I can tell that it's in the most natural place for a foot trail. There is just a little dip, the start of the watercourse, as the terrain goes down to the north and the trail stays on the east side of the dip right up to the rim. It doesn't gain a bit more elevation than it has to. Which is indicative of the foot trails that I have followed. It hits the rim at the lowest spot and right there a ridge runs down into a little canyon that runs west. This canyon is the start of that fork of Spanish Canyon. The trail goes down the ridge into the bottom. At first the ridge is a gentle slope, but the last 10 meters angles right down. The mules would have had a hard time going up this steep part. This ridge has a lot of erosion on it. The erosion told me that this was the trail, then I found the rest of it. In the bottom the trail crosses the little watercourse, and runs west along the slope, a step out of the bottom. The little canyon and the trail run west for about 50 to 60 meters and the canyon turns south. The trail joins the mule trail and both turn and go with the canyon, down the main canyon.

The mule trail is with the foot trail until close to the rim on the north. Several meters back this seems to change. At the high point on the ridge a finger of a ridge runs down to the east, and a long gentle ridge runs down to the south. If you were on the bottom looking up, this would be the high point. I believe both of these ridges were used by the mules going east. There is very deep erosion on the ridge running up from the south, and a trail and erosion on the finger of the ridge running down to the east. The mules were loaded going east so they would have used the long gentle ridge going up. Then gone down the east ridge and joined the foot trail. Going west it was different. The mules were loaded light or empty. They did not have to use the long gentle ridge. They could go over the rim and down most any place along the rim, and I believe they did. The mule has the reputation of being a stubborn animal. I believe what I see now at the rim bears this out. The mules would have been in strings, one driver leading several. If one mule in the string balked at going over the rim it would have stopped that string and everyone behind it. The other drivers would have simply gone around it and so hit the rim at a little different spot. It looks like mules went over the rim just about everywhere that they could, on the west side of the foot trail. There is erosion to indicate this. Going west empty, they could have gone down the steeper places. At the bottom the mule trail rejoins the foot trail and they turn and go south. Up on top, the rim extends north from the high point maybe 3 meters before it starts to drop and turn west. Where it starts to drop, a rather steep ridge runs down to the west. It ran into what later became the wagon road. There is light erosion on this ridge. That light erosion means that a few of the mules were on that side of the long ridge so they used the short steep ridge to go down. There might have been problems getting many of the mules to go down off of the rim so with the slow down and confusion that's why they were spread out so far. The mule trail staying with the foot trail like it did on top, it could have left it a little sooner, then rejoining it right at the bottom, is firm evidence that the mule trail followed the foot trail.

The wagon road was made from west to east. That is the first wagon over it went that way. The next wagon(s) would have just followed that track. Where the mule and the foot trail join there is a small open area. When that first wagon rolled up to it, they must have stopped and looked. They couldn't use either the foot or mule trail as they were both on ridges. The only thing left for them was to go up the steep hill right in front of them. The distance was 40 to 45 meters and gained 10 to 15 meters elevation. To stand and look at it now it looks like the best place to go up to the rim, but it was steep and almost as high as the mule trail. It was not a big obstacle to them, a group of men with horses and only a light wagon. However, later when the freight wagons rolled up to it loaded, it was a heartbreaker. It is easy to see why it was called Impassable Pass.

The teams would have been working hard to get to the open space at the bottom of the steep hill. When they were there they would have had to stop and double teamed the first wagon to go that last little pitch up. They would have un-

hitched the team from the second wagon, brought it around and hitched it on in front of the first wagon. Then they could climb the hill. Then they would have taken both teams back and pulled the second wagon up. This would have been repeated until all of the wagons were up on top. Going down would not have been a snap either. On a hill that steep the brake on the wagon would not have stopped it from running over the team. They would have had a pole that they could put in the rear wheels to lock them. As the wagon started over the top the pole would have been put between the spokes of the rear wheels, then as the wheels turned the pole was brought up gently against the wagon bed, thus making a positive lock on the wheels. They could have also tied the wheels with chains, to keep them from turning. The wagon might have had to be pulled a little to get it to start sliding down the hill. Today, the old road right at the top is rutted deeper than the rest of it. This sliding would have tore the road up enough to have caused the most erosion on it up there. At the top the rut is over a meter deep and it gets less as it goes down. At the top now there is a monument made of stones, with a wooden plaque in it. The plaque has been vandalized, but is still barely readable. Some people with rocks in their heads think its great to shoot holes in plaques. It is dedicated to the three early trails that cross the summit there. At the bottom and top of the steep pitch rocks have been placed in the old road. The monument and the rocks were put there by Boy Scout Troop 64 of Lenwood in 1969. The rocks were put there to stop the off-road vehicles from completely wiping out Impassable Pass. I say with feeling: Thank you, Troop 64.

There is one more trail that leaves the top and goes down to the open area at the bottom of Impassable Pass. This one is a question. The ridge that makes the west side of the U has been used. There is light erosion on it. At the top, what looks to be a foot trail runs out to this ridge. There has been so much activity both at the top and the bottom that I cannot follow anything to or away from it. I can only guess who might have used it and why. The erosion is light so it looks like human feet did it. With the short piece of trail at the top that looks human its a good guess that it is. Even a little use by mules would have made a deeper trail and more erosion than there is. If the trailwalkers moved up there and used it, why? The only reason I can think of is, that this is a braid. I have a thought that is just a thought. There is nothing to support it. The first ridge that I described as being the one that the foot trail went down, has quite a lot of erosion on it now. Was there enough erosion on it when it was being used that it bothered the walkers? Did that erosion bother enough that some of them moved over and used the west ridge? Normally, the trailwalkers went the shortest and easiest way. The west ridge is the highest and slightly the longest, so it is the hardest, but I believe this is possible. If both ridges were being used when the mule train arrived then it makes sense that the mules went where they did. The oldest trail would have been the plainest. If only the west ridge was being used then it would have been the plainest and the mules would have gone there. They would not have stayed with the old trail like they did. The west ridge should have been a little the easiest for the mules. If it wasn't a braid there are just questions and no answers.

The almost level open place at the bottom of the hill that I spoke of is made by the little canyon, on the east, that the foot trail uses, and a little canyon on the west that the west trail uses, coming together. The west canyon is small, it does not have a real wash in it. The east canyon is the largest. This open area must have been a blessing to the wagon trains. It gave them room to maneuver. Regardless of which way they were going the room gave them a place to get ready for Impassable Pass or recover from it. There is evidence that at least a few had to recover from it. I found a broken piece of wagon wheel spoke in the open area. I wonder if someone didn't get the pole, between the rear wheels, up against the wagon bed gently enough and broke a spoke? What we know is; somehow a spoke was broken. At the bottom of the open area the wash that comes in from the east, curves around the point of the ridge that is the south side of the canyon, and heads south. The mules would have been both in the wash and on the point of the ridge. I found a mule shoe on the point of the ridge. A step up out of the wash. So some of the mules had trouble on that steep slope down, also. The current vehicle road runs in this wash. The wagon road crosses the wash and goes around the point of the ridge and curves east around the foot of the ridge. It has been written that the old wagon road is visible now only at Impassable Pass, where it goes over the top of the canyon. I will differ with that and give my reasons later in this paper. The mule and foot trail are together, stay a few steps longer with the wash, then leave it and go south. Here they are parallel with the current road and move out to 15 or 20 meters away as they go south. Here a person has to know what a foot and animal trail is like to recognize it.

This upper end of Spanish Canyon is like a valley. It is open with a few hills in it. The wagon road curves around the hill to the east, and then turns south and runs down between the first little hills on that side. Here it can stay away from any wash. This keeps it on the firmest ground in the area. I believe that this is the wagon road. The freighters would have had to find the firmest ground to run on to make it possible for the teams to pull the wagons up the canyon. The canyon gains around 290 meters in elevation in the seven kilometers it runs. In the last two kilometers it gains the most, more than 100 meters. The bottom of the wash is a fine alluvium gravel so it can get very soft. The wagons would have had to stay out of the bottom all that they could. It was a real pull to get a wagon up that canyon. They only had to be a little out of the bottom to find larger more stable alluvium. There are spots where they had to be in the wash, there wasn't anyway to get out. To find the old road I looked in the places where they could get out and be away from the softest surface. The mule and foot trail did much the same thing. In spots the trail is farther out on the side than the old road. There is vegetation in these spots and I wonder if the brush didn't tend to keep the wagon road a little closer to the wash. If this is true, then why is the foot trail farther up on the bank? When it was made it would have had to fight the brush also. I have not found an answer. I can only wonder, what brush was there when the foot trail was made? There has been climatic changes, so there could have been vegetation changes as well.

When the two tracks leave the open area and go south, they both leave the wash immediately. There is firm evidence of this. The current vehicle road is in this wash; down perhaps 100 meters a rock bottom runs across the wash. It is almost on a level with the alluvium, in the wash, so is easily driven over. If either the wagons or the mules had of used this wash there would have been tracks on this rock. It is a soft rock. I hit it with my pickhammer and put the point into it about a centimeter. Both the wagon wheels and the mule hoofs would have left wear marks in this rock if they had of run over it. There is no mark of any type on it. The rubber tires of the vehicles do not leave a mark on it. That is firm evidence that the two tracks that I found east of the current road are the old wagon road and the mule trail.

Spanish Canyon is a little like a fan. The bottom half is the handle and the top half opens out and washes come in much like the ribs of a fan. With the canyon open like this the little washes come down from the rim, run together and make larger washes. Even these little washes were a much firmer surface for the wagons as they turn south and run down between the two lines of little hills that are east of the current road. The mule and foot trails stay closer to the current road and go just on the west side of some little high spots down about 125 meters. About 250 meters down the trail is pushed west by a hill and is briefly joined with the current road. The trail seems to stay down this wash. The walkers and mules were not bothered by the soft surface like the wagons were. Here the wagon road is more than 100 meters east and is in some small washes. Here I had to check and be sure that I was still walking on the road. Now I am east of the hill that pushed the trail west and again between two hills. The washes are starting to get larger so more water has run down them. The water has run some in the road so it makes it harder to see. Below the hills enough water has run in the washes to make the road hard to follow. I had to think road when I looked down the wash, then it looked like a road. In one place I followed the road into the dip of a wash and I could see it when I went out, so I knew I had walked the road, down the wash. As I went on I found a place where I could see the wagon road go into the current road. Here there are some low ridges on the east and a higher dark ridge on the west and the two roads go down between them. I am more than half a kilometer below Impassable Pass. I believe it is possible that I have the trail here. It is just an open path through the vegetation, but it is in the same wash and in line with where I had it up above, so it should be it. Below the dark ridge the wagon road moves to the east and becomes hard to see. There is a hill on the east and the canyon narrows down some, but I believe I can see the road.

Now water has gathered in the road and ran down it, so it gets real hard to see. I am below the dark ridge, and back in the wash, almost a kilometer down from Impassable Pass. There is a small light ridge that extends on down from the dark ridge. There is a break in it and the wash and current road run through it. I believe I can see the trail above and below the break. It is dim, but is possible and its where a trail should be. Right along the edge of a little ridge just out of the wash. I'm about forty meters east of the main wash, and can see the

road go on down and into the main wash. I am back just below the little ridge the trail ran along. Here the wagon road comes in from the east. It had gone east to stay on a firmer surface. I am more than a kilometer down the canyon. Now there is a higher ridge on the west. The trail runs along the base of it. There is a narrow flat between the ridge and the wash and the trail runs down it. At first it is hard to see because its like a small wash. Water has run down it. As I look back up the canyon it is right in line with the trail up there. As I walk along the ridge ends and water has run in from the west. Across the water wash area the trail is dim but plain. Looking into the sun I could tell that I was firmly on the old foot and mule trail. The big wash is on this west side of the canyon, a few steps away from the ridge. I can see the road come down to it and then angle away from it to the east to get back onto firmer ground. There is a large flat here and the road runs down across it. As it goes, it angles just a bit to the east, as it goes down and across. On this flat the road has erosion on it, so it is an old track, like it should be. The wash has been on the west side and at the bottom of the flat and bends back to the east side and the road goes into it. The canyon opens out and there is a bench mark over on the east side. I am one section down the canyon.

The canyon opens out wide to the west so that its almost like a valley, and several washes come in from that side. This pushes the main wash over on the east side, next to the little hills that are there. This puts a long slight bend in the wash as it curves to the east. On the west side of this long bend is a flat. The trail first and then the road go down this flat. The road must have stayed along the west edge of the wash, because its about 400 meters down from the bench mark before I can see it again. Then its about 30 meters west of the main part of the wash. Here I can find the mule trail again. Its about 50 meters west of the road. It lines up right with where I saw it back up the canyon. Neither track is real plain here, but I sure I'm right. Everything looks like it. The track that I'm calling a road goes straight at the next bend down below, just like a road would do. Along here with the washes that come in from the west, the footing on the alluvium is much the same regardless of whether your over in the wash or out here on the side. As I go down, there is a section of the trail that looks like it was braided. It is as wide as a wagon road, but is a single trail on both ends.

At the bottom of the long slight bend, more then a kilometer down from the bench mark, a ridge comes down from the east and the wash goes around it. Right here a big wash comes in from the west and all signs of the road and trail are gone. Only a track in current use would show here. The first desert willow in the canyon are here. There are many more as I go on down. As I look at the terrain I will make a guess that the road angled down across the wash to the east side, and it is possible that the mule trail moved with it. However, there is no evidence of it now. When I am past the wash there is a gentle slope up on the west side, but there is no sign of the road or trail on it. Over on the east side of the wash there is a long narrow strip that is flat. I believe that I can see the road in a spot or two for a short ways on it, but not for long. I

can't find the mule trail here so without a doubt they were both together.

As I go down this piece of road I cross a section line and am half way down the canyon. I call this part of the canyon, to the bottom, the stem of the fan. Most of the washes have come in now, and there are high hills on both sides. The hills on the west are back a little, but there is a slope up to them that keeps the wash almost straight as it goes down. The higher hills push the wash together so its not as wide as it was up above. With this the wash is mostly straight and most of the water has come in, so any tracks that are visible are out of the wash. The only flat, out of the wash, now is on the east side. The rest of the way down to the bottom I can only find the road on the east side.

About a kilometer down into section 31, on the west side of the wash, there are two small hills. The one nearest the wash is CA-SBR-6550. The top of the hill is almost flat with a rocky surface. In the surface are 7 circular clearings 1 to 3 meters across and 2 long clearings, one 5 X 2 meters and the other 4 X 2 meters. There is no order to them, they are just scattered around. The circles do not have firm edges, they fade out into the area around them. The small circle, 1 meter across, has rocks with flat tops set flush with the surface around it. It is possible that this is a spirit circle. There are no artifacts or debitage in the rocks.

There is a stretch down through section 31 where the neither the road or trail are visible. To try to get some continuity, I will make some deductions on where they might be. The last place that I saw them up the canyon was on the east side, and the next place I find them down the canyon are on the east side. Also, the east side of the wash is a little more rocky so would have been a little firmer footing. Along with this the site that I have just mentioned is in this stretch. I have never found a trail that went right to a site of this type. Jay Von Werlhof of the Imperial County Museum (Von Werlhof 1993) has told me that he has never found a trail that went right to a site like this. With both of these facts in mind I would say that the trail and road went down the east side of the wash. A trail will go past a site but not into it. This makes sense. Anybody could walk on the trail but only those that had a reason to be, would be in the site.

Now as I go down through section 31 I need to leave the main trail in the wash, and take a short look at a trail that runs west. Here as I go down Spanish Canyon, the high hills, on the west, are back away from the main wash. This makes a place for the site, on the hill, that I have just mentioned. This open area, to the west, ends abruptly when a hill rises to more then a hundred meters high, right at the edge of the wash. Back of this hill there is a pass that goes into the canyon to the west. At the crest of this pass, a monument has been erected, and a sign placed on it that says; Old Spanish Trail. I believe the Old Spanish Trail is the mule trail that here, is in Spanish Canyon. As the sign says, a trail goes over this pass. Because this trail is labeled Old Spanish Trail and I'm writing about the Old Spanish Trail, I need to comment.

At the crest of the pass, where the trail should be the most visible it is plain but not beat into the surface. It has very little erosion on it. I followed it as far as I could, both ways. To the west, much of it has been destroyed, by off-road vehicles, made to travel very rough terrain. They ran right down it and wiped a good part of it out. I could only find little pieces of it that were left. To the east, down into Spanish Canyon, it is dim just a little distance from the pass. I could find it on the north side of the watercourse, it goes down, for a short distance. Then it goes into the watercourse. The watercourse bends and the trail cuts across the bend, and goes back into the watercourse. By now the trail is very dim. Down about 40 meters I believe I can see the trail leave the watercourse and go up onto a step higher place. Then a vehicle has ran on the trail and I loose it. Here I am about 200 meters from the wash in Spanish Canyon. The trail seems to be headed right at it.

Now lets look at some hard cold facts on trails. Any trail used a great deal by human feet will have erosion on it now. The foot trail at Impassable Pass is an excellent example of this. I found the trail there by the deep erosion. If mules have used any trail then the erosion will be deeper, if it goes down a slope, and there would be a deep trail on the flat. This trail at its best has very little erosion. There is no way in the world that its a mule trail. It was a lightly used foot trail and that is all. It is very common for a trail to go over every pass between watersheds. There is one more point. This trail goes over a steep hill, as it goes west over the pass. The mule traders were on a long hard trip. They would not have taken their mules over such a hard pass, unless it was necessary. They could work mules to death on this trip. They would not work them any harder then they had to. This pass was much longer and much harder than, Spanish Canyon. To call this lightly used foot trail, Old Spanish Trail, is modern mans poor judgement.

At the southern edge of Section 31 and the northern edge of Section 6 is a rocky point which juts into the wash from the east. It ends in the wash. Just beyond the point are some desert willow trees. Between the point and the first trees the trail leaves the wash and starts down the flat on the east side. Now, where the trail leaves the wash are vehicle tracks. Down the flat 15 or 20 meters the vehicle tracks goes east and the trail stays straight. Here the trail is a path through the vegetation. It has eroded more than the little washes close to it and runs straight. It is the only thing that I can find that looks like it might have been a trail and the mule hoof would have caused the erosion because it no not part of a wash. Over the long period of time there would have been enough water in it to have caused erosion. The main wash I angling more to the west side of the canyon and runs down through a number of desert willow trees. On the west side of the canyon here is a wall of hill and cliff that is about 100 meters high and the wash runs along the base of it. The east side opens out along here and the flat is on the side of the canyon. In about the center of the flat, on the north end, 50 meters past the trail, there is now a road that runs down thought the flat. It is a vehicle road now, but I am convinced that it was the old wagon road. It is the firmest footing in that part of the canyon and runs to

the bottom of the flat. When I first looked at this stretch of road it had the look of a very old one, dim with some vegetation starting back. Modern vehicles were not using it then. Now they are using it regularly and the old road look is gone.

As the high hill on the west side of the canyon runs down and ends, a ridge extends down and out into Spanish Canyon from this hill. There is a saddle between the high part of the hill, and the part that runs out and down into the canyon. What appears to be a moderately used foot trail, comes up out of Spanish Canyon and crosses this saddle. This is right at the southern edge of section 6. This trail goes west to Mule Springs, a little more than a kilometer away. By going to the trail where I had it firm, I can follow it back to the Mule Trail and see where it angles off. It is dim on the flat where it leaves the Mule Trail. It is common for a trail to be dim if its on a flat, then if it runs up on a slope, to become more visible as it goes up. This trail is like that. When I go to the slope where it is visible, I can see it and walk it back out onto the flat, where it is dim, and see where it forks off of the main trail. There is the track of one motorcycle on this trail, the first part of the way to Mule Springs. The motorcycle picked up the trail a short distance from where it forks off of the main trail, and just stayed on it. The trail was visible enough for the cyclist to see and stay on.

The trail forks off to the West, in the flat in Spanish Canyon, and in just a few meters steps up to the toe of the slope. Here it becomes more visible as it angles toward the slope. It runs up and over a ridge that is maybe 10 meters high and goes down into the dip on the other side. It goes up the bottom of the dip a few steps to a rise, and goes up and over the pass. As it goes over the pass, it turns south between two slopes and goes around the toe of the one on the west. Then it turns west and runs on a heading of 250 degrees. The trail is on a slope as it runs around the base of the steep slope, to the north. There is a small fault zone here, and the trail runs down through it, in a dip. Its not really a watercourse, but an opening down through the fault zone that misses the humps, of the fault. At the bottom, the ground becomes very rocky, with fist sized rocks, and the trail becomes harder to see. The trail turns almost west and gets dim in these rocks. Now the trail runs straight over a ridge that is about 2 meters high. It is so steep that I had to find an easier place to climb it, but the cycle went right over it. The trail is starting to get dim, and the cycle leaves it and turns south. In this rocky ground, on a moderate slope, the trail becomes very hard to follow. This rocky area extends west for some distance. I had to hunt to find a piece of trail I could see. Then I would line up the direction and move ahead carefully looking for another piece. There were stretches where I couldn't find any trail at all, so I just kept watching my direction and moving on. On the west side of the area, there are a number of ridges running down from the higher hills, on the north. These ridges are mostly earthen, with not near so many rocks. The trail is plain as it runs across these ridges. The ridges are maybe 8 to 12 meters high, with little watercourses between them. The trail goes almost directly across paying very little attention to the terrain. The rise out of the last watercourse, before Mule Springs, is

steep, and the trail runs up the bottom for maybe 20 meters before it goes up a less steep ridge. On most of the ridges, there is very little angling to make it easier to go over them.

All of the area around Mule Springs has had so much traffic from modern man that no sign of the trail is visible now. When the trail leaves Mule Springs, to go back down to the North Trail, I believe it went close to where the current vehicle road goes. I can't find any trace of it. I looked in the little watercourse, that runs away from the spring, and couldn't find any sign of it. The only other place is where the vehicle track is now and there has been too much disturbance there to find it. It does go down and joins the North Trail, in the wash out from Jasper Butte. There may have been times when Mule Springs was the only water between Bitter Springs and the Mojave River. That was when this trail was used. From visual observation we know that when the early miners came that there was a trickle of water out of the spring. They dug the spring out and put in a tub to collect the water. The mine was about two kilometers to the west. This was their only source of water. There never was enough for the mule traders.

The trail is on the east side first and then angles into the road. It crosses on a long angle and is on the west side. It is very hard to tell for sure, but I believe that the trail and road stay close together as they go on down the flat. The center of the flat is a step higher than the sides, and I cannot find anything that looks like a trail on it. It is very possible that the trail stays close to the road, and in a place or two they could be together. At the bottom of the flat the big wash is angling back to the east side, and the road goes out into it. Here all of the water has come into the wash so there is no sign left of anything. This is in the middle of the section. The trail seems to make a long angle down across the wash and go out on the west side. There are several small washes that leave the main wash, on the west side, along here and the trail is one of them. On down I can pick out places that look like trail. It follows along close to where the bank starts to rise, but out in the bottom, in the brush. In places water has ran in it and its a little watercourse, but in other places it is not a wash, but a firm trail. This is almost at the bottom of the canyon and the road is not visible. It had to be in the wash, because there really isn't any other place for it. The wash is on the east side here, next to the hill that is the end of the east wall. Here the wash starts to move back to the west. This is in Section 6. The west ridge runs well into Section 7.

Both of the high sides, of the canyon, ends at about the section line. Then a low secondary ridge extends on south, on the west side. It is so low that it really doesn't show on the Topo Map. In this part of the canyon the west side is flat and brushy with little watercourses running down through it. As the ridge runs down it becomes quite low, the last part is just a low point that runs out and ends. The wash swings back to the west to this ridge just before the ridge ends. The trail is visible just before the wash hits the west edge, right at the bottom. After the wash hits the west ridge everything is washed out. I looked hard at the area. Here the road had to be in the wash beside the west ridge. That would put the road and trail together to at least the point of the west ridge. At this point

the wash forks. Part turns west and runs around the ridge. Out about 30 meters, south, from the point is a butte. I call it Spanish Butte for identification. It is a small oblong contour on the Topo Map at the fork in the wash. The wash runs between the butte and the point of the west ridge. Up next to the point I found what looked like a trail that runs west. When I walked out on it I found enough trail to know that I was right. This would be the north side of the fork that I found just west of the playa. That means that just out from the point, north-east about 50 or 60 meters, in the big wash, the trail forked. All signs of it have been rubbed out long ago by the water. The road would have been right there with it. Here the wash and tracks are on a heading of about 200 degrees. As the wash goes south it slowly swings west to a heading of 240 degrees. This takes about a kilometer. Here at the fork the wash is a rather large open area coming down from the north. The total wash extends out to the east to the second wash line on the Topo map. Then there is a bit higher area out to the last wash line east, but its all the same wash. Its a big wide wash after it leaves the canyon.

Opposite the butte, on the east side, there are brush and rocks in the wash. In the brush and rocks there is now a wash that must have been the wagon road. The main thing I have to go by is direction. It is in line to be the road and is the right width. It runs down for about 100 meters and bends west and I loose the road. Near the start of this 100 meters I believe I can see the trail go out on the east side. There has been enough water go past here that nothing is firm. At first I tried to make the road stay in the wash, but it didn't work. The wash changed and wasn't a road and it was bending west. I found another wash that looked like road a few steps east. Then it did the same thing. It bent west and didn't look like a road. Along here I can't find anything that looks like a trail. I have a spot or two that's maybe, on the east side, but that is all. The way the road moved from what now looks a little like a wash to the next one puzzled me. I needed to know where the road went. I knew that the road was visible down just before it left the wash, in the southwest part of Section 7. So I went down and found it. Then I walked it back to the north. At the south part the road was on an area a little higher than the washes around it. If enough water was running down the washes it would have been an island. It is just high enough that water has not run on it in a long time. The road is firm where it goes up, out of the wash onto this area from the south, and can be walked up through it to the north end. The trail is firm where it leaves the wash and goes up on this area, and is just several steps east of the road. I can follow it for maybe 100 meters, and it is always a step or two east of the road. When the higher area ended I was on the road looking north. The trail is two or three steps east and is visible for a short distance. My pickup was on the road the last place that I thought I had found it. Now knowing that I was on a road I walked straight at it. As I went I could see what the road did. Up at the butte the road was near the west side of the wash. The total wash is wide, and the road had to work across it to go out on the south side. It was working across. It would follow a small wash south, then as the wash started to bend west, to

the low side, leave it and work to the east, to stay straight and away from the sand.

Down about a kilometer from Spanish Butte there is a hill that turns the whole wash to the west. The road leaves the big wash just past the west point of this hill. As the wash goes down, the west side is the lowest, about 30 to 50 centimeters. The small washes will angle into the low side. The road would use what is now a wash for a short distance, if it went right. Then go out to the east when the wash angled west. This way it stayed a step higher on a bit firmer ground, and while doing it, worked across the total wash. Where the road went was a more rocky stretch and stayed out of the sandy open places. There is one place now where there is erosion that was caused by the wagon ruts. Water has ran down the rut, and made a deep little channel that is in line with the road. The road caused the erosion, which is normal, because the wheels had broken the ground surface. Just south of this the road goes up onto the step higher area I have called an island, and is visible and firm for about 300 meters. The trail is right there with the road on this stretch. Just past the west point of the hill the road turns into the wash and goes across and out on the south side. One of the motorcycle races to Las Vegas went up Spanish Canyon and entered the wash right here. The hill bunched them and turned them into the wash at this spot. Now everything on the south side has been altered by wheels and some water. The erosion out of the wash, from the road, and trail are gone. Part by water and part by modern man. This made it hard to find them in close to the wash. I had to follow the foot trail up from the Alvord Mountain Mine Road to the wash and circle out to the south to find the wagon road. Here the road with the mule trail, and the foot trail separate, so I will have to describe them one at a time.

As I go on down the three tracks that I am following, I encounter a major change in terrain. I have been following the tracks down a broad wash in a broad canyon with the combined effect of the hills and the wash governing where they would be. From this point on the road and the mule trail will be out in the open as they cross the desert. There will be a slope in places, like down to the playa, but no hills. The foot trail will be in the open also, except for the southwest end of the study, where it will be in the Calico Hills.

As I go south of the wash there is a big change in the surface of the desert. All of the way down Spanish Canyon the surface was a light alluvium, that was almost sand. In places it is very close. Here it starts to become harder surface. It holds the wagon tracks much better. I believe that if the motorcycles had not have ran over this area so hard, the mule trail would have been more visible, also. As I go down the surface changes and becomes lighter. In the lighter surface the road becomes harder to see. It slowly becomes dimmer until I had to check real close to be sure that I was on it. Up close to the wash in places I can see two tracks, and in one place three. The second and third tracks are very dim, indicating they were only used part of the time. Apparently when one track became torn up the drivers just moved over several steps and made a new one. Now those extra tracks are only visible for a short distance down from the wash. As the surface becomes lighter

they can no longer be seen. When I get close to the playa the best track is gone and I had to use another method to follow the road.

When I first started to look for the wagon road, south of the wash, I went back out into the wash. Looking at the tracks out in front of me, I lined up a spot on the south bank where it should be. I went over and looked but there wasn't any indication of road, at that spot, that I could find. Out on the island, when I looked south down the road, I could see the east end of the Calico Hills. I had the road very firm down there, so I thought that the road here would go right at it, or a heading of about 200 degrees. There just wasn't any sign of wagon tracks going in that direction. I knew that the road had been visible before the races to Las Vegas so I thought that the road had been rubbed out. South of the wash a short distance, there was a set of tracks going west on a heading of about 220 degrees, but that was to much west, so I had looked more to the south. The heaviest motorcycle tracks are just south of these tracks. When I had looked hard south and not found a thing, I wondered about the tracks going more west. Even though they had started wrong I knew I had to know where they went. It only took a short walk to tell me that they were the tracks I wanted. Then with a little checking I found out what threw me off. When I stood on the tracks and projected them back, to the bank, the tracks didn't go across and down about 45 degrees like I had thought, they did when they crossed the wash. Where I had thought that they went out, on the south side, is now a vertical bank about a meter high. I had assumed that this bank had been cut after the road and trail had gone out of use. I was wrong, but it must have always been at least a steep place. The road went across but down maybe 20 degrees. The tracks are gone in the wash before they show this. Where they hit the south bank is a more gentle place to go up. The water has washed all of the erosion away now, that was in the wash, that the trail and road left. Now there is just a small bank there. The motorcycles have erased what was up on the bank. It looks like it was always an easy place to go in or out of the wash. Both the trail and the road use this spot, so that must have been the reason. There is no real indication of the road or trail right there now. I had to go out and get on them and walk them both back to the spot, and then I could see the little indications that told me that they were there once.

I went to the wagon tracks headed west and started to walk. I was surprised to find that they were only 20 to 25 meters away from the foot trail. The road and foot trail were parallel with each other for about 200 meters. Then the old road starts a slow gentle swing to the south. When it completes the swing and is headed for the east end of the Calico Hills, it is out about 500 meters. There is a real interesting point here. There has to be a reason why the road parallels the trail as long as it does. It would have been a bit shorter to have gone more south first. I wonder what circumstance caused the mule trail to stay that close to the foot trail before it started its slow turn away. Again, I have a thought that is just a thought. For some distance the mules had followed this foot trail. When they left the wash they must have known the next water was much more south. But, as they had traveled along they had

stayed with this trail. It had been a guide to them. Were they reluctant to leave it? Or was it, that the mule driver, in the lead at that moment, did not know just where to turn more south? I wonder if one of them was the reason why they stayed close to it for 200 meters or more before they started to swing away?

The Foot Trail

The foot trail is not easy to see when it first leaves the wash. I had trouble finding it because there are motorcycle tracks close and it was very hard to be sure which was which. I had to know I was right, so after I had found it where it crosses the Alvord Mountain Mine Road, I followed it east, back up to the wash, and marked it. To find where it left the wash I had to go to my mark and walk it back to the wash. It got real dim as it neared the wash, but knowing I was on it I could see it. It hit the wash at the spot that I have said there is now a vertical bank about a meter high. This bank was washed there while the trail was in use. After the bank was cut by the water, the trailwalkers just turned a little, and went along the top of the bank, upstream, to where the gentle place to go in or out of the wash is. To where the wagon road later entered or left the wash. The trail is real dim here, along the edge, so it wasn't used long. Then, in crossing, they went more directly across, on a shorter angle than they had crossed before, as they went to the trail that was already on the north side of the wash. Later when the wagon road came it went across on the same angle. Both the trail and the road are gone now, at the edge of the wash, so they don't show this. When I lined up the erosion on the north side of the wash and looked across, they both looked like they crossed on a long angle. On the long angle I had looked right at this vertical bank. At that time I had assumed that the bank had been cut after the trail and road went out of use. I have said that there is no erosion on the south side. There must have been some. The water washed some away, and the motorcycles must have erased the rest. There should have been something visible from the mule trail and the wagons. When the mule drivers followed the foot trail across they would have gone up, onto the bank a bit farther than the foot trail, to firmer ground, and then angled west. The vertical bank could have been trouble for them, to have stayed close to, with the mules. That could be the reason why the road is 20 meters away from the trail at that place. When the foot trail first leaves the wash, it runs across a small area that looks like, some where back in geological time, it was deposited there by water. The surface is not as firm as the desert several steps both south and west of it. It is more of a sandy soil. The cut of the vertical bank shows this. The firmer desert was put there by a different geological event. The trail runs a short distance before it reaches this real firm ground. The road is on it almost from the start.

Once on the real firm ground, the trail is more visible, but the motorcycle tracks are trouble. At first it looks like the trail is braided. It has all of the earmarks of it. Then the motorcycle tracks angle in and nothing is clear. It becomes very hard to stay on the trail. A great many motorcycles have come up across the desert and entered the wash here. Their tracks are

over the trail in places so I had to be very careful of what I called trail. There is a track about two meters south of what I believe is trail, that I believe is the braid. There is some variation in the visibility of the trail along here. A new motorcycle track should not show variation. The braid seems to stay for some distance. I am puzzled by the variation, because the surface seems to be the same. It is a fine gravel on a hard base. First one side and then the other side of the trail will be plainest. I can't see any reason for it now. It could be just one of those strange quirks that time and weather create. The vegetation here is creosote community, with the creosote bushes being rather large. As I go along there is a large rock on the surface, here and there. The trail goes right by a large basalt rock that is perhaps a meter long and a half meter wide. About 20 meters past the rock the braid ends. I can see the two trails come together. The single trail doesn't last long. It becomes braided again, but this time the trails are a little farther apart. Then motorcycle tracks cover the trails, and I can't tell for sure but I believe the braid ends. There is a larger number of creosote bushes now, but they are smaller, and fewer burro bushes. There are more rocks now. They are up to softball size. The trail stays away from most of them. The trailwalkers stepped over them when they had to. I can see this, so this is a trail. The motorcycles would have just pushed them aside. Now there are tracks on the trail, but I can see the tracks go off to the north and the trail go straight ahead. I have come to some erosion on the trail and then another spot of erosion. This is very firm evidence that I am on an old trail and not a track. I am coming to the Alvord Mountain Mine Road now and the trail goes straight across, so I will pick it up on the west side.

On the west side of the road the trail is clearly visible. It is still on a heading of 220 degrees. It goes out about 150 meters and drops into a wash. Then there is a fair distance that this wash is real trouble. Back where I said that the trail and wagon road leave the last large wash, that wash took a heading of 240 degrees. That kept it north of the trail. This is the same wash that has now angled to the south, and runs across the trail. The flow was weak when it got down to here, but it has washed the trail out every place it has ran across it. I had to take my direction carefully and go across the wash areas, and hunt for it on the other side. It was about 100 meters across the first wash, and the trail didn't seem to go straight across. I found it 6 or 8 meters north of where I thought it would be. I wonder what was there when the trail was made to make the trailwalkers move over. Nothing is there now. Where I could see it the place was just a bit higher than the wash. In a few steps the trail goes up on a higher place and is visible as it runs between two small washes. It crosses the wash on the north side and I can still see it. Then it becomes real dim as it goes on across the wash. The sun is just right to be all of the help it can be. I needed the help. As I go along if, I can see the trail at all it is very dim. Most of the way it is gone. I have to watch my direction very closely. In several places I found a very dim short piece of trail. The surface is a fine material here, so the trail didn't hold. I'm crossing the last wash now and the trail is gone. As I step up out of it the surface starts to rise, and the trail becomes very visible. The sun and

my direction took me across that bad area. Up on the rise the trail is very visible. There's a bench mark south about 60 meters. It is a 1/4 mark between sections 22 and 23. This puts it on a north-south section line, in the center of the sections. The Topo map is vague on detail here, so the firm location really helped. The high area is a bench, and about 75 meters past the bench mark it drops off with a gentle slope back down to the level of the rest of the desert. On the bench the trail is very visible with erosion on it. When it goes down the slope it makes a small angle to the north, so that it doesn't go directly down to the desert level. That makes it just a bit easier to go up or down. As it goes down the slope it is very visible with considerable erosion on it. After the dim trail I had crossed a little east, it really helped to have it so firm and visible.

Down on the flat when I looked ahead the trail is very dim and seems to disappear. I am about 150 meters west of where the trail was so plain, and am approaching the playa. Now the trail is so dim it is very hard to stay on. Direction is my main help now. Now there is a little watercourse across the trail, and I can just barely see trail past it. There are several more watercourses and I can see the dim trail go across them. Then the trail becomes more visible and I can walk right along on it. I am close to the playa now and I run into motorcycle tracks. They have erased the trail, and I can only go by direction. Luckily, they didn't stay on it long and I can see the trail again. The vegetation is light here but nothing has grown on the trail so I can see the path that is trail. Now I'm at the gravel at the edge of the playa and the trail is plain and firm, with erosion on it. Then I run into heavy four wheel vehicle tracks and the trail is gone. The last place that I could see the trail, it was starting to make a slow turn to the north. I looked at it carefully and it looked like it was going to where I thought it entered, or left, the playa on the west side. I had been right about that spot. A wide area, perhaps a hundred meters wide, extends out into the playa there. It is a meter or two higher than the playa, and extends out at least a hundred meters into the playa, from the higher ground where the fork is. This south trail goes up onto this area on the south edge, and runs along the edge to the slope, then angles right and goes up to the fork.

Now that I had followed it to the playa I knew why I couldn't find it when I first looked for it on the east side. First, the motorcycle tracks. They were everywhere, on everything. It had been perhaps three years since I had hunted for the trail here. In that time the tracks had faded much faster than the trail. The tracks had been ran once, but the trail had been used a very long time. The new tracks had faded faster than the old used trail. I had walked across the trail several times, but did not recognize it as trail with the tracks on it. Now, knowing that I was on a trail, and the tracks fading, I could recognize it as trail. I had crossed it where it was so dim or gone, that I couldn't pick it out. I didn't happen to go up on the bench where it was so plain. I had crossed it up east of the bench, where it was almost not there. I was on it there by direction, not trail signs, so I couldn't see it. On a real dim trail, I have to know that I'm on it. To really see this trail I

had to walk it from east to west, into the sun, and watch direction very closely.

The North Trail

I am back up at the mouth of Spanish Canyon, where the north fork of the trail goes west. The fork its self was out in the main wash, maybe 50 or 60 meters northeast of the southern tip of the west ridge. Now, water has ran where the fork was, so the fork is gone. The spot is not important. The important thing is I know it forked out there.

At the mouth of Spanish Canyon, the high hills that are on both sides, end almost opposite each other. Then a lower, kind of secondary ridge, extends on down on the west side, for almost a kilometer. It is so low that it doesn't show on the Topo Map. The last part of it is only 2 or 3 meters high. About 30 meters out from the southern tip is Spanish Butte. The trail runs past the southern tip of the ridge, out 2 or 3 steps, and goes with the wash. When I first looked at the trail there I didn't recognize it. It was a small path that a small amount of water had ran in, once. That had been some time ago. I had walked over it several times. When I had mapped the south trail and started to look for the north trail I was thinking trail. Then I realized that the path I had been walking on was trail. I walked west on it, and I was right, I found firm trail. There were just little pieces, but they were firm trail, and were in direct line with the point. This was just before the hard rains of 1993. Before the rain most of the water that had ran past this tip of the west ridge, was out in the wash, and went almost to Spanish Butte, about 20 meters, before it turned west. Then, when it rained hard something had changed, and the water now ran around the point, close to it. This has made a wide little gully where the trail was once. The trail is gone now, and as the water went west it damaged some of the pieces of trail I had found, earlier.

A major change had taken place before those rains. This was the first hard rains since the Landers earthquake. Previous to this, most of the water that had ran past here, that came out of Spanish Canyon, had gone almost to Spanish Butte, then turned west. That was no longer the case. The Alford Mountains are a cluster of small faults. I wonder if the big shake caused some movement in those small ones that changed the flow of water in places. Water ran where it had not run for a very long time. A piece of the south trail was even washed out. I don't remember a wash down there before. It was fortunate that I had most of the trails that were damaged, mapped before the rains came.

As I said earlier, when the two trails were in use, they would have forked out in the wash, 50 to 60 meters northeast of the tip of the west ridge. There is only one thing important now, I know that they forked out there. After the north trail ran around the tip of the west ridge and went west, in just a few steps it angled a bit more south and took a heading of 260 degrees. When I first walked down the trail here I could see several little pieces of trail. Now with the water damage the first pieces are gone. With that a string of off road vehicles drove through here, and what the water didn't destroy they did. The

first sign of trail that I can see now is a small wash that lines up right, by direction, to be trail. I am down about 100 meters below the west point before I can see the first piece of firm trail and the wash seems to tie into it, so it should be trail. The big flow of water was just to the north of here, so I can see trail going down through the creosote. There is another little wash that lines up right to be trail. These little washes have only had a trickle of water in them. I am down maybe 200 meters before I can see a dim piece of firm trail again. The heading is still 260 degrees. In some of these dim pieces there is enough firm trail sign for me to know that they are trail, and with that they are all a path through the vegetation. The normal trail sign is almost gone, so I look for the path through the vegetation, that runs in the right direction. This is one of the areas where the trail is so dim that I have walked across it many times and never recognized it. When I knew I was on a trail, with difficulty, I could see and follow it. I am another 50 meters past the last place that I saw trail, and here is another piece I can see. Along here water has ran in the past, so all the trail signs are dim. The high water of the winter before has made things worse. If I did not have a firm trail direction here, I would not be able to follow it.

On the south now, there are some higher fingers of land, about a meter high, running down from the northeast, and as I go past them I get into a wide area that is mostly wash. It runs generally north to south, with the main part of the wash, over on the west side. Jasper Butte is just to the north, of me. The wash runs on the west side of it, and drains the canyons that are on that side. When Mule Springs ran a trickle of water, it came down this wash. This east side, of the big wash, is several channels with islands in between them. On two of these islands I can find evidence of the trail. One of them is about 40 meters long. The trail that left Spanish Canyon and went to Mule Springs, comes back to this trail here in this wash. Water has washed out the junction, but I can project it and be very close, when they are headed for each other right out in front of me. Jasper Butte is just north of me and the wash is on the west side of it. There is a significant amount of archaeology in this general area.

As I move along this section of trail all of the normal trail signs are dim or gone. I need every bit of help that is available to me to find it. I use the sun and direction all I can. When I find a piece that I know is trail, I note its location and at times will place one rock on top of another to tell me the trail is there. That helps me to look back and know where the trail is, and if I come along here again, I know that I'm on a trail. As I start to move west, into the big area of wash, I am going past the higher fingers of land on the south. When I can find trail now it is starting to make a gentle curve to the south. It is 220 degrees now. The last time that I was along here I left my mark and here it is again, so both times I have thought that I was on trail. Now I'm on a very old vehicle track that has not been run on in a very long time. As near as I can tell the left wheels of the vehicle ran down the trail. They line up with where I can see trail both directions. On out in the wash I found firm trail on two of the islands. Then I took the direction and walked on across the wash. On the west side

of the wash, a gentle slope runs up to the west and north, to the higher Alvord Mountains. The wash runs along this slope and when it ends curves around it and runs southwest. There is a flat strip between the slope and the wash, several steps wide, and the trail runs along it. When I first stepped up on to the strip I saw a path that a trickle of water had ran down. Then more water came in and it was a small watercourse. When all of the water ran back into the big wash, there was my trail plain and firm. I was walking on it. Another one of my markers was here, so I knew that I was on a trail. Here I am due west of the hill in the southeast 1/4 of section 12 T 11 N, R 3 E. This hill is my guide for direction, as I do any work looking to the northeast.

On the strip, by the wash, that the trail is on, there is a small bush that grows close together. It is part of the creosote community. There is a fair amount of it and the trail is a clear path through it. It is hard to see trail, but the bush helps. The trail angles away from this strip and cuts across the toe of the slope that comes down from the Alvords. The wash that I have just crossed and walked along, now starts to curl around the toe of the slope. As it does it joins a wash that is coming down from the east. This wash brings all of the water back together that flows out of Spanish Canyon, in a very hard rain. At the mouth of Spanish Canyon the wash is wide, and the water can run far apart, on both sides of it. The trail fork that I just left is on the west side of the wide wash. All of the water that flows east of Spanish Butte would be in this wash. The south foot trail, mule trail, and wagon road cross this wash together about a kilometer to the east. As it runs to the playa, its a wide wash on a heading of about 220 degrees, with a foot trail on both sides of it. The trails are some distance apart. I don't call this a braid. I believe both trails had their firm need and use, under different conditions.

I would like to inject a thought here. Not to far back in geologic time, Mule Springs ran from a trickle to a small stream of water. The small watercourse going away from the springs is proof of this. This small stream or trickle would have crossed the foot trail as it crossed the wash. With this water available, the trailwalkers would not have needed to go up to the springs for water. Then the weather turned more arid and the springs went down to a very small trickle. The evidence the early miners left when they tried to develop more water makes this point. When the water went down in the spring the trail walkers had to go up to the spring for water. Then they beat the trail across to Spanish Canyon to save steps. To me the trail from the springs to Spanish Canyon is firm. Except for the rocky center area, that didn't hold a trail, most anyone could follow it across. Now my thought. The trail across is not beat deep and firm, like most trails. Most foot trails are 35 to 40 centimeters wide where they still have their original width. This trail is more like 20 centimeters wide, and is not beat flat and wide. To me this means that, it was not used long enough to be beat flat and wide. If there is a fair amount of rain, there is a small trickle of water in Spanish Canyon, just above where the Mule Springs Trail comes in. Now I wonder; was there water enough of the time in Spanish

Canyon that they only had to go to Mule Springs occasionally? I wish I knew.

Just before the two washes come together, the trail on the west side of the wash, leaves the wash and cuts across the toe of the slope, coming down from the Alvords. This is just a few steps before the washes come together, so the trail has to angle west, to go down the now, larger wash. It angles across the curve and saves a few steps doing it. When it angles away from the wash, it gets onto a hard surface. This hard surface does not show trail. The light has to be right for me to see the trail. A vehicle drove the trail some time back and makes the trail hard to see. It looks like the track is right beside the trail. Then another vehicle drove beside the first track, but luckily did not get onto the trail. Then both vehicles went right and I can see the trail again. It is very dim, but knowing that I'm on a trail I can see it. The vehicle comes back and is right on the trail, so I can't see it at all. Then it goes right again. I have to check my direction and walk straight head. Now several little washes come down from the north across the trail, so I still can't see trail. Across the washes I can see trail again. It is very dim but I'm sure I can see it, and it is in line with my landmarks. My landmark here is the northwest corner of Jade Hill, probably 10 to 12 kilometers away.

Now I run into a major problem. The trail runs in the channel of the wash. The wash itself is several meters away on the south, so is no problem. The north bank is a quick rise, over on my right. All of the surface material is alluvium, so it is soft. It has not held the normal trail signs at all. All I can do is look for a path through the vegetation, that runs at my landmark. My heading is still 220 degrees as I walk slowly, and look hard. The vegetation is not as thick as it is south of Jade Hill, so I don't have a constant trail. Direction is very important. When I find a path that lines up right, it is just a short distance. I would look hard at it to see if I could see anything that would help me find it farther on.

I had an experience here one day, that both helped and hurt me, as I hunted for the trail east of the playa. I had hunted for a considerable period of time down by the playa, for the trail that ran east away from it. Due to the tremendous number of motorcycle tracks, I couldn't find it. I thought that if I moved up away from the playa to a different ground surface it might help. I moved up several times, but there were still too many tracks. Then one day I drove up the wash that I am following and stopped and looked. I found a beautiful site. It had potsherds, jasper, chalcedony and basalt tools and flakes in it, with 3 sleeping circles up on the north bank. On my next trip out there I had a site record with me to fill out on it. My next trip was just several days later, but while I was gone it had been picked up. I filled the site record out from memory. Now walking from the truck to the site, I just happened to see a very faint trail. The light was perfect to see it. I went ahead with my site report, then came back to find it again. I knew within 2 or 3 steps of where it was at, but I could never find it again. This told me that the trail ran along this wash. I hunted very hard for this trail in the area that lined up with this wash. I limited my movement to a small area north to south. I hunted hard in the limited area near the playa and spent too

much time there. There were just too many tracks for me to find it close to the playa. If I had not found the trail here, I believe I would have spread my search out more and very likely would have gone up on the higher area where the trail is so visible. After I found the south trail I wondered why I had not found it when I looked down there. I just didn't go far enough.

As I went on down the wash I stayed close to the north bank. I knew the trail ran along there. In a place or two I found with the path, enough indication of trail to know that it ran there. The ground surface there was just a bit firmer, so it was where the trail would be. I ran into a place where water had ran across the trail, so it was gone there. As I get across the place where the water ran, I come to the Alvord Mountain Mine Road. This road has been graded, so it is well used. I crossed the road and started looking. I had to zigzag to find something. I found a slight path through the vegetation that lined up right with my landmark. As I went along on it, I found a red jasper flake, so it should be trail. Now it was getting late in the day and I needed to be starting for home. I made two little rock cairns, three rocks high, to mark where I stopped on the trail.

When I went back to walk this last piece of the trail, about three kilometers, I chose to park the vehicle as the playa. I had to walk both ways so it did not make any difference which end I parked on. I knew where the trail was and I now had a firm landmark to walk toward on the east end. By starting at the playa and paying attention to direction, I could run an absolute check on how close I was to being right and on the trail at the mine road. I had to go back to where I had stopped when I was working west. On my way east I found several short pieces of foot trail the motorcycles had somehow missed. When I reached the mine road and looked for my two markers I was only several steps away from them. My attention to direction had paid off. The wash that I have been working in on my way down from Spanish Canyon was now starting to grow small. The water that had flowed down it had not soaked into the sandy alluvium.

Working my way west the wash makes a little angle north, so the trail crosses it. There is no trail sign of any type in the wash, so I had to cross. When I reached the south edge of the wash as I walked east, I had tied a yellow ribbon on a creosote bush. When I couldn't find any trail sign in the wash I went back to that ribbon as my guide. Once on firm desert in just a short distance I located a small piece of the foot trail. It was in some heavier brush and I believe that motorcycles had stayed out of the heavy vegetation so that a piece of the trail was saved. It is a big help to find a piece like this. This part of the desert continues to be a gentle slope to the west. There are small washes but no large ones and no gullies. Most of the way I cannot be certain that I am seeing trail. I think I can at times but I can't be certain. It has been more than 20 years since the motorcycles ran here so their tracks are fading. When I find a short piece of trail and the direction is right I think I can tell that there was a trail there once under those tracks. On my way to the playa I found 3 or 4 pieces of trail. Each one of them was in some heavier brush. When I reached the playa I

was right in line with the firm piece that I had there. I had walked the trail down from the mine road.

I stood and looked at the trail at the playa and wondered about it. Where I had it firm was in a rocky area at the edge of the playa where it was well beaten and not disturbed. I believe that motorcycles must have started their run up out of the playa. They would have driven their transportation on the playa and unloaded there. Then driven slowly over the rocks because the rocks were not disturbed, to be in position to start a race. The race that started here went to and up Spanish Canyon. So all of the tracks paralleled the foot trail. With the direction the same cycles ran on the foot trail and destroyed it. With the firm direction to work with, I was able to find little pieces of it as I worked my way east. I was not able to find the south trail at the playa until I walked from the east. At the playa it is very dim. Just a small change in variety of grasses that grew a little differently on the trail. I had to be walking on it and see the change to recognize it as trail. I had walked over it several times, I just didn't happen to go far enough east to see where it is firm trail. I spend a great deal of time looking close to the playa before moving closer to the Alvord Mountains to try and relocate it. Then I was lucky and found it crossing the Alvord Mountain Mine road and unraveled the rest of it from the start.

The Old Playa Trail

When I stepped out onto the gravel where I had the north trail firm at the playa, I lined up the trail with the spot where I think it went into the playa. It looked like it would hit the west bank, very close to where I thought it would. There is no trail sign on the surface so I only had direction to go by. It was very close. This north trail hits the shoulder of land, that extends out into the playa, almost at the northeast corner. The trail runs to the west until it hits the little hill that the fork is on, then angles up the hill to the fork. At the bottom of the hill, at the angle, there is a scatter of chalcedony flakes. This flake scatter is on the edge of a small playa that is on the shoulder. When there was water running out the outlet, this playa had water in it. The scatter is SBr-5603. I walked on up the hill and found the fork again. I always have to check and find the fork, it is very hard to see. I went down the south fork, and went across to the east side, of the playa, to where I had the trail there. This was the first time that I had been back since the hard rains of 1993. There is a large area of gravel, on this east side, and I had worked the trail just onto it. I couldn't follow it far on the gravel. There were vehicle tracks everywhere. The trail had just started to curve to the north, to cross the playa, when I lost it. I made an educated guess as to where it would hit the west bank. By this time there the maze of vehicle tracks had been almost washed out. The very old trail had out lasted the new vehicle tracks. I could see the trail, clear out to the edge of the clay, of the playa. The trail continued to curve, like I thought it did, and hit the spot that I thought it would, on the west side. It made me feel good to know that I had guessed that closely.

This west bank and the little hill that the fork is on is part of what Dr. Meek calls a beach ridge complex. The whole thing was deposited here by the Mojave River in its meanderings, after Lake Manix dried (Meek 1990). All of the complex is very soft soil. The surface has not held any of the normal trail signs. As I go west of the fork all I have to follow is a path through the vegetation.

On my first time here, when I had the grass higher, on the trail, then the grass beside it, I had something to follow. Now, without that help, I do not see a clear trail. The vegetation is burrobrush and galleta (bunch) grass, with some creosote. It looks like the galleta grass has closed the trail off enough to make it hard to see. In just a few steps the land dips down into what looks like once was a playa, when there was more water. This is a little basin, and the trail runs along the south edge, and then up the west side. I loose the trail on the west side. Up on top, the surface is even as I look ahead and off to the south. On this even area the galleta grass is very thick. It looks like to me that it is creeping in and taking over.

There is a fair distance now where no trail sign is visible. All I could do was walk toward my landmark. In places I thought maybe I could see a short piece of trail, but nothing to prove it by. The south side dips off into another playa that is about 100 meters long and 50 meters wide. There is a dip off to the north, and the trail stays on the high ground between. Now there is a much larger playa on the south, and the high ground bends, just a little, to the south. The galleta grass is not so thick now, and I'm starting to find little pieces of trail. The trail seems to stay on the higher area, which I think means that at one time there was water in the playas. The trail makes the little bends with the high area, but its never far off of my landmark. As I find these little pieces of trail I notice something. The galleta grass will grow right in the trail and hide it. The other brush will grow in close, but not right in the trail. This is why, back where the galleta grass was so heavy, I couldn't find any trail. I am through the thickest growth of galleta grass now, and am finding more trail. Now a playa goes across the trail and the trail crosses at the highest spot in the playa. There was water in the playas at one time. On the west side of this playa I can tell that I'm on a trail. Its a path through the burrobrush. I am on a braided trail now, and the braid ends for a few steps and then starts again. I am coming to the section line road that is on the west. The cleared land is 200 meters west of this road. The trail from the road to the cleared area, seems to be braided all of the way. The trailwalkers really did it in places. The trail is in section 29 when it hits the east side of the cleared area.

The First Part of the West End Trail

All of the south side of section 29 has been cleared by a homesteader so the trail is gone there. There is a road on the south side of the section. The trail becomes visible south of this road in section 32. It is just in section 32 enough to be in it. It runs across the northwest corner, and is in the section for about 200 meters. This little section is still firm trail. It is a clear path through the vegetation. Then it crosses the road on the west side of the section, again a section line road, and goes

into section 31. In section 31 everything changes. From section 31 southwest to where I loose the trail it is more open and accessible to motorcycle groups than it is on east to the playa. These motorcycle people have raised havoc with much of the trail and they completely destroyed all of it around Jade Hill. The only good part for me is, that I already had it mapped. Now, when I wanted to go back and collect those interesting little things you see as you walk the trail, so I can try to make you think you are walking the trail when you read it, they are gone. From my map and memory I can still walk the trail as it goes around Jade Hill, and never be more then four or five steps off of it. But the trail its self is gone. There are short stretches where I can still see enough trail to know right where it was at. With this there are places where their tracks are on the trail, but I believe I can tell that the trail was there. I do this by very close attention to direction and watching for a path through the vegetation. I will do my best to see and in turn tell you what the trail did. It will be easier after I get south of Jade Hill.

It is not hard to get started on the trail in Section 31. The little short piece of trail in Section 32, east of the road, is firm and easy to see. It is only necessary to find that firm piece, line up the direction and walk west across the section line road and there it is. At first the trail is just barely visible. If I didn't have the piece I can see in Section 32 it would be hard to find. There is a path through the vegetation that is visible and the heading is 220 degrees. The two of them together, and the fact that I walked the trail when I could still see it, tell me that I'm on the trail. There are faint trail signs on the surface, but it is necessary to know trails to recognize them. Here it helps to know that the trail goes around the northwest edge of Jade Hill. It doesn't go up on it, just around the edge. The trailwalkers could have saved a few steps if they had of gone up on the edge of the hill, but they chose not to. So I look for a path through the vegetation that goes just west of the hill. As I go west the trail becomes very hard to see. At about 100 meters from the road there is a nice chalcedony flake in the trail. I have seen it before, so when I see it again, I know that I'm on the trail. I am following a clear path through the creosote. At about 150 meters west of the road the clear path makes a slight bend north to a heading of 230 degrees. In about 40 or 50 meters the path bends back to 220 degrees. Along here the path is wide enough to have been a braided trail two or three meters apart. This is wide enough to see it. There are no trail signs now, so I just have the width of the path to go by, but it sure looks possible. Around 250 meters west of the road the trail goes back to a heading of 230 degrees, and goes up onto a little higher spot. This higher spot is an extension of a small ridge the runs north off of Jade Hill. There are lower places on both sides of the high spot, so maybe there was water in the low spots once, so the trail stayed up out of them. Again, the trail looks like it was braided, with 4 or 5 meters between the trails. When the braid ends the trail is very hard to see. Occasionally there is some little thing visible that I recognize as trail and this is the only thing that tells me, for sure, that I'm still on the trail.

With the little things I can see and by watching direction I can stay on the trail. Again, the trail looks like it was braided with the trails 2 or 3 meters apart. I am at a rocky outcrop that runs down from the north side of Jade Hill. There is a break in the outcrop and the trail goes back to a single trail and runs through it. It is a firm trail as it goes through the break. The rocky outcrop kept the cyclists away so I can still see normal trail signs there. When I first walked through this area after the cyclists where here, there were motorcycle tracks everyplace. I mean everyplace, up on the hill, and down on leveler areas north and west of it. I could see individual tracks. Now, after the rains of 1993, the motorcycle tracks are gone, but the trail is too. There is a Borax mining claim north of the trail here. I am right out on the north side of Jade Hill. Some little ridges come down off of the hill along here and the trail goes to a heading of 230 degrees to stay away from them. It does not climb any of them, but runs along the north edge of them. Along here the trail is very dim and I really have to watch to stay on it. Within these little fingers of ridges, there are rocky places. The rocks are a little larger then most desert pavement. There are some cobbles in them. In one of the rocky places there is a very nice cluster of chalcedony flakes. There are chalcedony flakes in all of the rocky places and a scraper in one of them. This was a used area and the hill was a quarry. It is recorded as SBr-2130. The creosote has thinned out as I get to the northwest side of the hill, and I can no longer see a path through it. I need to see a piece of trail here and there to know that I'm still on it.

The northwest edge of Jade Hill is not really a ridge, but a bit higher place where the hill slope goes from a north face to a west face in a few steps. The trail goes around this higher place, not over it. There is something here that I have seen in other places where I have followed trails. I have two schools of thought on it, and I have no way of knowing if either is right. The first is, the trailwalkers did not climb anymore than they had to. Here, they could have made a gentle climb and gone over the higher place, and saved some steps. It would not, in anyway, have been hard. Instead, they chose to go around it, out where they almost didn't climb at all. The secondthought is that they were superstitious enough that if a place became evil to them, they went around it. Also they could have gone a combination of the easiest and the shortest way. The easiest way might have been used here. If it was necessary they went straight over what was there, the shortest way, even if it was hard. As the trail goes around this higher place, it takes a heading of 210 degrees. As it continues on past this higher place it keeps turning to a heading of 200 degrees. Now, the trail is a little more visible, and I'm sure I'm on it. Here it looks like it was a braided trail, about 2 meters apart. There is a little more creosote now and I can see the trail better as I look ahead of me. I need that path through the creosote, because the trail its self is very dim.

The first time that I walked the trail along here there was a fork and a trail went off running several degrees east of north. I followed it a short distance, perhaps half a kilometer, and then it faded away. Now I can't find any part of that trail at all. I have looked hard for it, but the motorcycles wiped it all out completely. It was a firm trail, until it just faded away. In

the area where the fork was, the main trail is gone now. This was at the high place at the northwest corner of Jade Hill, as the main trail is turning east. As I go on south here I have to watch my direction very closely. The cycles really impacted this area when they were here. When I can see the trail it lines up with a watercourse that runs northeast out of the Calico Hills, 3 or 4 kilometers away to the south. Then when I can't see the trail I walk at this watercourse. When the trail becomes visible, I am right there with it. As I move on south, I am at about the middle of Jade Hill. Here I am south of the area where the motorcycle riders milled around and wiped everything out. These older tracks are now fading, and the trail is a little more visible than it was for a year or two. This trail was used heavy for a very long time so the track was well beat into the earth. As the cycle tracks fade this old trail will be dimly visible, in places, to someone that knows trails. These strings of cycle tracks so close will make it very hard to pick the trail out, as I go south. Now I have a good landmark that tells me I am on the trail. There is a major benchmark between Sections 36 and 31 on the north and 1 and 6 on the south. It is the meeting place of T10N and T11N and also R2E and R3E. There is a jog in the north-south section lines due to the correction for the curvature of the earth. The benchmark is at the west corner, where the section line goes south, between Sections 1 and 6. The trail is two steps east of this benchmark.

There is somewhat of a section line vehicle track going east and west here. As the trail runs south, away from it, there is a very old vehicle track on it. This makes the trail very hard to see. At about 100 meters south the vehicle track is gone, and the trail looks like it was braided. It looks like the braids were 3 to 5 meters apart. There is an old east west vehicle track now and the braid seems to end when it crosses. One side of the braid seems to be plainer than the other. Maybe it was used more. Just past this the trail crosses a piece of light desert pavement, where the trail is very visible. When I can see a piece of trail like this it reinforces me. I know I have stayed on the trail. The trail is still on a heading of 200 degrees. I need this direction, because now I'm at a place where I can't see the trail at all. This is one of the places where the big group of cycles ran right down the trail. The trail is one of the tracks that I am looking at, but I can't tell which one. I continue on and come to an east west road. Across it I believe I can see the trail. It is dim, but it is headed in the right direction. In just a few steps I come to the Coyote Lake Road, it runs about north and south, and I can see the dim trail going across it.

As I go south and west from Coyote Lake Road, the terrain is slowly dropping down. The low spot is about 150 meters west of the road and is 5 or 6 meters lower than around Jade Hill. In the low spot there are some higher humps, that the trail misses, and some desert pavement, that the trail crosses. There are lots of motorcycle tracks on this desert pavement. I am sure that I have the trail, because I am on the line from where I had the trail up by the road, and it looks more like a trail than a track. Now I am out more than 200 meters and the general terrain starts a gentle rise to go up into the Calico Hills. This rise is the slope that runs down from

the hills on the north side. As I go up this rise I have to be very careful to watch my direction and find a path through the vegetation. My heading is still 200 degrees. The trail that I walked the first time that I came along here is gone. I have to be careful that I am not walking just a track. Everything is either motorcycle tracks now, or just a clear path, because the rain washed the tracks out. I took the clear path that I could see going up through the creosote. I remember the trail being rather wide as it travels this slope, and here it looks like it was a braided trail 2 meters apart. Here the trail is very straight and it looks more like the creosote grew up to the trail, rather than that the trail was made through it. Then it looks like the braid ends and it is one trail. In just a few steps it opens out again and becomes braided. Now I come to a place where water has angled across from the east side and everything is gone. Direction and what appears to be a clear path is the only guide I have. The water came right down what I think is the trail. There are some rocks in the watercourse and here and there a chalcedony flake in the rocks. The water ran down what I think is the trail for some distance. The first time that I walked here I could see trail. I think what must have happened is, the big group of motorcycles came right down the trail here and this changed everything. Then when the rains came in the winter of 1993 the water ran down what had been the trail. I seem to remember the trail being close to the wash, but not right in it. That clear path that I walked up, that looked like a wash, must have been the trail once. I have to get up closer to the hills before I can see a clear path, that has a trail in it. Its on the east side of the watercourse. Now I am in the area where the watercourse leaves the Calico Hills and runs out onto the slope. There are many more rocks here. The trail is visible in the rocks. There very well could have been two trails here, or a braid, that was several meters apart. Both look like they were human trails first, the motorcycles ran them, but did not destroy them in the rocks. Both trails have some little bends in them, but they bend together, like a pair, and it looks like they bent to stay out of the wash. In this rocky area there are chalcedony flakes in the rocks. As the trails run through the rocks they have the look of human trails. They are beaten deeply into the rocks, they have feathered edges, and there is some erosion in both of them. They also seem to be in paths in the creosote. There are motorcycle tracks everywhere, but they have a little different look.

Here, I am entering the canyon or valley that the water course that the trail runs along comes down. This watercourse put the water over the trail back down the slope. The trail is not visible above the rocks, at first. As I go up this little valley the first bend in it goes to my left, east. The trail comes around the bend, close to the hill, and is very visible. Seven meters east of the trail on the edge of the hill, there is a nice cluster of chalcedony flakes, with a core in it. The hillside around the flakes seems to be barren. Now the canyon angles a bit east and opens into a small basin. The watercourse divides and runs some on both sides, and the trail stays down the center. The center of the basin is just high enough that the water runs around it, so the trail is visible. The trail crosses the watercourse and runs up more the west side of the basin. The next bend goes to my right, west, so the trail stays closer to

the hill on that side, as it goes up the valley. This basin has had water over a good part of it over the years, but the trail has been spared and is a path with a piece of trail visible here and there as I go along. When I can see the trail here it is a line of erosion running straight up the clear path that heads for the next turn. At that turn the canyon angles back a bit more to the west, and is close to the heading of 200 degrees.

I need to mention another trail here. This little basin is made by the canyon when it opens out, angles a little north, as it goes down, before it angles back east to go on down the slope. The hill that is the east side drops down real low. There almost isn't a rise there. The rise is like a berm that is not more than a meter higher than the basin. That's enough to turn the water west of the hill, that is below on the east side, and make the basin. On the berm now there are lots of motorcycle tracks. They hide everything. When I first walked down through this little basin there was a beautiful white chopper on the berm. It is gone now, so someone else found it and didn't leave it. I didn't check the whole berm then for a trail, but I should have. I had one out in the basin, so I didn't think to. There has to be a human trail under those motorcycle tracks. Below the berm, on down that little watercourse there is a well beat trail. I can find a piece of trail, going west from the berm, that lines up right, to have joined the main trail that I was following, out in the basin. The cycle tracks cover it on the berm. This trail, that is just east of my main trail, a small ridge runs between them, runs down and out onto the slope and parallels what I think is the main trail that I walked up. It doesn't have a clear wide path through the creosote like the other trail, but it is a human trail. It has escaped the motorcycles on this upper end. I walked it with no difficulty, all the way to the bottom of the fan. It seems to be about 20 meters east of where the cycles ran the main trail so hard. It does pose a question. Why does it run so close to the main trail and not join it? I have looked at it and thought about it, and I can only come up with one thought. This trail stays away from the wash that I said ran across and down the other trail, the one I call the main trail. The main trail is a wide path through the creosote, and from the width seems to have been braided much of the way. This indicates the most use. It is very possible that when the trailwalkers first walked this trail, they stayed away from the wash, so it wouldn't bother them. But, over eons of time the wash moved back and forth across the slope, and at times bothered them. So they moved east about 20 meters, to firm ground, and made a trail away from the water. They only used this trail when water bothered the main trail. This could be the reason why it doesn't look like it was used as much and is not braided. The two trails run side by side for about a kilometer, so there has to be a reason why they stayed apart. They come together at the bottom of the slope.

The Last Part of the West End Trail

Now, back up to the basin to continue on south. The trail runs on up the basin to the hill that is on the west side. This hill is not a point but rather a longer hillside with the wash right beside it. The trail is in the wash as it goes past the hillside. Past the hill the trail crosses the wash and is on a clear

path going right at the next point, that is on the east. This is a wide path so it was a braided trail here. Here I am following the straight line of erosion made when the water ran down the trail. The motorcycles were on the west side of the valley here, so I can see the trail. Now the point of a rocky ridge comes down from the west. The wash is right beside the point here. It is not a high point so many of the cycles ran over this point, so the trail is not wiped out. I can see it in the wash. This must have been a fun bump for the cycles. Going on up the valley the trail goes around the next bend well out away from the hill. It is 30 or 40 meters out, and very well could have been braided with the braids 2 to 3 meters apart. As I go around this bend to the east, the little valley is starting to narrow down. The trail crosses to the west side and I can see it leave the wash. As I go on up it the trail is dim. The only sign I have is erosion, trail size, running straight up the valley. It has to be the trail.

As I get up to the next hill, on the west, the trail is plain. The trail must have gone into the wash as it goes around the hill, because its completely gone. When it leaves the wash, it climbs up on the edge of the hill, on the west side, and runs along maybe 40 meters. It rises to maybe 2 meters above the wash and is real firm right here. The valley has narrowed down now and the wash is at the edge of the hill. There is no way to tell now, but I wonder if it wasn't a braided trail here. The hill is an easy slope and some of the motorcycles were up on it above the trail. The trail runs back into the wash and crosses. It gets very hard to see, because its so close to the wash. I can find a piece of it where water has ran down it and caused erosion. Its straight so its trail.

The valley is narrow now and with the wash all over the bottom, it makes the trail very hard to see. A point comes down from the east and I believe the trail went over it. The trouble is so did the motorcycles, but I will guess that the trail was there once. I am having trouble with water and tracks. The motorcycles seemed to have gone up on the hill to the west, but now I have an old 4 wheeled vehicle track. It had large tires and it looks like one of them ran right up the trail. The valley is to narrow now for the vehicle so it went up the hill to the west. Now I can see erosion and the trail crosses the point of a hill that comes down from the east. There is a stretch now where the bottom is covered with wash so the trail is not visible. In about 100 meters a point comes down from the east and I can see the trail cross it. The trail is gone again and then it climbs out on the west side. It runs along on the west side and is far enough out of the bottom that I can see it and know that it is trail. The motorcycles were just up above it on the hill here. The bottom is just narrow wash now, too narrow for the cycles. The trail goes back into the bottom and comes out again on the west side. I can see it run along here and then it makes a tiny little turn and goes up and over the summit of the pass. On the summit the trail is plain and firm. It is a rocky summit and the trail has lasted well in the rocks. There are some scattered flakes and cores in the rocks. They are just in a small area. There doesn't seem to be too many. I have come up the valley and watercourse from the northeast, and here the watercourse going away goes about 250 degrees for a short distance. The trail crosses the summit on the south

side of the pass and stays down the hill on the south as it goes west with this watercourse. The motorcycles came up from the west and ran along on the hill on the north side, of the pass. They crossed the summit north of the trail a fair distance, and angled down the hill going east. That's why they were up on the hill, above the trail, back down below. As the trail comes up the watercourse, from the east, as it nears the summit, the watercourse is much too narrow for the motorcycles. So, they stayed up on the north side until there was room in the bottom. The leader of the group had been over this part of the trail before.

As the trail goes down the hill on the south side of the watercourse, that runs southwest, it is a firm trail. It has erosion on it and all of the earmarks of a well used old trail. When it gets to the wash at the bottom it is gone. It had to go down the wash, so I went down looking for it. Here I ran into the motorcycle tracks as they came up out of the south, crossed the wash and started to climb the hill to cross the summit on the north side. I had a great deal of trouble trying to find the trail. I tried to stay too close to the wash, and there was nothing but tracks. I did find a short piece of what looked like trail, but it went into the wash, and I knew the trail, I wanted, stayed more up on the hill, to the north. I ended up going out to the west, to where the trail was firm up away from the tracks, to find it and walk it back. Out there the motorcycles had been on the east side of the little valley and the trail was on the west, so it was not damaged.

It is about 150 meters, down the wash, where the trail leaves the wash. Knowing where the trail enters and leaves the wash I believe I can see it in the wash. Its somewhat of a path through the creosote. When it leaves the wash, I can tell its trail because the cycles have not ran on it here. Most of them are just starting to come up out of the big wash on the south. Now the big wash is angling more south. The trail is on the northside, in a rocky area and this surface holds the trail real good. The trail goes right up and over a little rocky ridge and drops down into a little wash on the west side. Here the little valley that the trail is in is almost a basin. The east side has turned south and the west side is a little cove. The heading angles to 200 degrees. Now I have some interference from four wheel vehicles along with cycles. They did not rub the trail out, so I can see it go into another wash and out on the west side. They mused the trail up but I can still follow it. Most of the tracks were just off of the trail. Across the wash the trail goes over another rocky ridge and this time there are some tracks on it, but I can still follow it. This is a rocky area, so most of the cycles stayed down in the big sandy wash, on the south. In the cove on the west side there is a fork. It is a classic fork. Each side curves, about the same, off to its new heading. As I get close to the forks I am out away from the hills on the north, and the surface is almost flat. The trail heading is still 200 degrees and the cycles were east in the big wash. The forks are in the flat area, and are plain and firm. There are some old cycle tracks at the forks, but they do not hide the trail.

Now the right fork or the one going southwest, does a strange thing. It could have turned to almost west, gone up a

little watercourse, over one ridge and down on to a flat where I loose it, when it gets there. Instead, it goes southwest, on a heading of 220 degrees, over one ridge, then in the bottom, makes a 80 degree turn to the north, goes over another ridge and down to the bottom, then over the third ridge and down to the flat. The ridges are not real plain on the Topo Map, but they're there. It is very unusual for an old human trail to turn 80 degrees in several steps. I will try to detail it. From the fork the trail crosses the wash, it could have gone up, the one from the northwest, and goes up to the top of the first ridge. This is a rocky ridge and the trail is firm in the rocks. There is erosion on it. There is a pile of rocks on top, that was obviously maned by non-Indians. It has nothing to do with the trailwalkers. The trail stays straight over the top and down the west side. The west side is rocky and the trail is firm there. As it starts up out of the bottom, it turns 80 degrees to the north in several steps, to 290 degrees. As it goes up, the slope is not so rocky, but there is plain erosion on the old trail. Right on top the trail is a little dim but visible. It makes a small angle to the north, to 300 degrees, and goes down the slope. This slope also is not so rocky, so again the trail is a little dim, but still visible. In the bottom the trail makes another little angle north and goes up the slope on a heading of 320 degrees. This ridge is more rocky. On top the trail angles a little west and goes down the slope on a heading of 280 degrees. As it nears the flat it starts to angle more west, and on the flat takes a heading of 230 degrees. The flat is a gentle slope to the southwest to a large wash. As the trail goes down the flat it grows dimmer until I loose it just before it reaches the wash. If you will look at the map, you will see that the trail has gone around a hill that is to the north of it. There is no way to know now, but I wonder if that hill was evil to them. The trailwalkers would have had to go over the edge of it, to have gone the short easy way, so they stayed away from it. I wonder if they saw lightning hit it? I have studied the surface carefully where the short, easy way would have been, but I can find no evidence that a trail ever went there. The trail seems to have been made around the hill. I have one thought on it. The trail I am mapping has not been walked on steady for maybe 130 years, and in places it is real dim. If the trail was made around the hill, say a thousand years ago, the short easy trail would be completely gone now.

I have been walking the trail from the east to the west. I have just explained what the righthand fork does. Now I will cover the left fork or the one to the south. As the trail forks, both forks curve gently away to their new headings. There are several old motorcycle tracks right on the forks, but there are enough surface rocks that both of the trails are very visible. There are some cycle tracks just west of the south trail, but the trail itself was not damaged. The trail curves south to a heading of 160 degrees as it leaves the cove. It runs on across the little flat area to the wash next to the hill. For 30 or 40 meters it is in the wash, but I can see it go out on the south side. Across the wash the trail runs along the edge of the hill, where the surface becomes flat. Some water gathers here and runs down the trail. For perhaps 80 meters the water ran down the trail. The water angles east and the trail leaves it. Then the trail goes back to running along the edge of the hill, just like

it has been. It continues to run along the hill until a little ridge comes down from the west. The trail turns a bit west and runs over it. The trail is now on a heading of 200 degrees. The ridge is rocky and there are chalcedony flakes in the rocks. I am perhaps 400 meters south of the forks. The trail goes over the ridge and down into and across a small watercourse. The west ridge is now running down. A low ridge comes down from the west and the trail goes up on it a little. There was a nice chalcedony flake scatter, about 2 by 4 meters, here on the trail when I first walked it. It's gone now. The trail runs on over the ridge and goes down and off the point, and into a large wash that is angling in from the west.

As near as I can tell, in the large wash the trail makes about a 20 degree turn to the east. It doesn't go right across it. All trail signs in the watercourse are gone so its hard to tell just what did happen. There is a hill on the south side of the watercourse and the trail doesn't go over it. I had to go down the watercourse to where the south bank was just a little step up, to find trail. Then I found three trails. This made me stop and question what I think I found, in this valley.

The first time that I stood up at the fork and looked at the total area, I thought that there should be another trail out on the east side of the valley. The trail makes an arc into the cove where the classic fork is. Everyone that traveled the trail, would not have made the arc, unless they had a reason. A trail out on the east side of the little valley, perhaps a hundred meters, would have been the alternative. I went out and walked up through the valley looking for it. I found several short pieces of possible foot trail, but not enough to say firmly; there's a human foot trail there. At that time I hadn't found either end, because as I know now they are both in washes. I will not say there's a foot trail there unless I can find firm trail.

This time I believe I found firm trail. Where I said that I made the little step up, out of the wash, and found trail has always been a puzzle to me. The cycles ran across this spot and they didn't leave any trail signs. The second trail is 4 or 5 meters east, and the third is another 20 meters east. Everything is vague at the first spot. In the past, I stood and studied the spot, and said to myself, this had to be part of the trail. This time I took the trail direction and went north. There is a small wash that comes down from the north and joins the big one here. My direction went up this wash and where I hit the bank, there is a firm human trail going up the bank. I had never looked up this little wash before, but I should have. At the second trail 4 or 5 meters east there is another firm human trail. Its a braid of a braid. Then 20 meters farther east there's the third trail. This is the main trail that runs up the valley. Neither one has been run by the cycles, right here where they go into the wash. I knew that they were there. I had thought that once in the wash they all turned, and went up it, and became the trail going up to the fork, on the west side. This time I took the direction of both trails again and walked north on each one. Where both leave the big wash a firm human trail runs up the bank. I was able to follow all three of these trails running north, for a fair distance. Then they get into the heavy cycle

tracks and are destroyed. Why I didn't find this south end before, I don't know? I just didn't look in the right place.

Where the trails go south, out of the big wash, I tried to determine what had been there. The first spot, on the west, where it is a step up, is so vague its hard to tell much. This is the lesser of the first two trails. The first several steps look like trail, then the motorcycles mess up everything. It looks like it angles into the trail that is 4 or 5 meters east. There is so much damage from cycles that I can't tell for sure where they came together, but its not far. The east trail, of the braid, was not run by cycles right at the wash. The two trails would have been connected in the wash, then they would have gone up it to become the trail on the west side. On down south where its one trail, it is a clear path through the vegetation. The only trail sign is erosion where there is enough drop to cause it. That, with the clear path makes it a trail. The heading is 190 degrees. The third trail, the one 20 meters east, I believe is the main trail up this little valley. It did not go up to the classic fork. They were close on both sides, but somehow were not right on it. As I go south this is a rocky, heavy desert pavement, area. I could see the trails here, because it is a rocky area. The motorcycles were not right on this trail here, so it is a plain old human trail down through the rocks. It is a path through the vegetation, about 2 meters wide. Somewhere along here the trail on the west merges with this main trail, and the braid ends. There are just too many cycle tracks now to tell where. I am starting to get out of the rocks, and the trail drops down to the last little wash that comes in from the west. The west ridge ends just past this wash. There is clear erosion where the trail goes into the wash, and out on the south side. The west ridge has now ended and the valley opens out to the west. Here the surface is a light soil, so I have to watch for erosion in the path through the vegetation that I am following. There is a gentle slope to the south so the water running down the trail has made the erosion. The heading is still 190 degrees. The trail is getting harder to see on this surface. When I first walked the trail here I could see it, but now since the big group of motorcycles ran the area, I only have the path with some erosion here and there to tell me that I'm still on the trail. Several meters out on the west side there is a circular rock alignment, about 10 meters across. It has a straight line of rocks across the center, and just out of the circle opposite the line there is a short crescent alignment. This is recent disturbance because the rocks don't have patination on the bottoms.

Now the trail is getting hard to see. About a kilometer of this southern end is dim or gone. To follow it I had to walk it into the sun. I picked a late afternoon with a clear sky, and walked very slow. An old road crosses the area here from southwest to northeast. South of this road the path through the vegetation becomes hard to see. The creosote is larger and has encroached more into the trail path. Behind me as I came down the gentle slope the smaller bushes made the path much easier to see. South of the road the trail goes into what I call a sheet wash area. In a hard rain the water will run in small streams in many channels. Between the channels are higher places. Looking into the sun I can see the trail on these higher places. Doing this I was able to follow the trail across the

wash area to where the higher places were larger, so the trail was easier to see. At about 300 meters south of the road the trail goes into a wash where the trail is not visible. Its about 75 meters across, so I took my heading and went across. I was right on. The trail was there on the far side. The farther I go the dimmer the trail gets. As I go on, without the help of the sun, I wouldn't be able to see the trail at all. There is a clear braid in the trail now. The trails are 4 or 5 meters apart. The east side was real dim, and the west side a bit better, so I followed the west side. I never did find where they came together. There is a place here where a little trickle of water has ran in from the northwest, and the dip of the trail has caught it, and it ran down the trail. The water should have gone on down the slope, but the trail turned it for 50 or 60 meters. Past this the trail goes across a flat gravel area and is plain looking into the sun. Then I lost the trail for a short ways. I had to zig zag back and forth to find it. When I found it, it was so dim that I had to study it to be sure it was trail. The creosote is to thin here to see a path through it, so that wasn't any help. If I was on a trail, and in my heart I was sure I was, the trail started a little curve to the west. The surface is almost flat now, and I am starting to run into modern man interference. There is a road close. With the interference I have lost the very dim trail. I checked my location and I was real close to the bench mark BM92WFM 1896 feet, on the Topo Map. I have not been able to find the trail past this place, so I will have call this the southwestern end of the trail. This is where the large group of motorcycles that so damaged the trail for about nine kilometers, entered the trail. For around the first kilometer north they destroyed an already dim trail. The detail I had gathered on an earlier visit.

Concluding Thoughts

I believe that it was a fortunate happening when I was sent out to check this trail. At that time most of it was still visible. This is a piece of early history of the area that was being destroyed by modern humans. I have spent a great deal of time on it, trying to recognize everything I can still see. Much of it has been destroyed but I can still follow large portions of it because I walked on it when I could see it. I believe that there was much more to the trail than we can now see when it was in use. There would have been connecting trails and side trails that we no longer can see. Like the trail that went north at Jade Hill, possibly to Coyote Lake, that are gone now. The small part that I have been able to record and map is information that will never again be available.

This trail seems to do some strange things. I wonder how strange it would be if we knew more about it. I feel sure that it was one of the first trails in the area, so it was a main one. The side trails could have been added anytime. I don't really have questions about it in Spanish Canyon. For the most part it runs down the canyon, and I can find it where it isn't right in the wash. After it leaves the canyon I start to have many questions. The are: 1. If it were a more pluvial time I can see a need for the two trails that run down to the playa. The south trail was the dry trail that was used when it rained. There would have been water in the main wash and many side washes

at the time of use. The north trail was a few steps shorter and would have been used in the dry season. This would have been necessary only during the Pleistocene or during extremely wet durations. The trailwalkers would only have gone down to the playa, where they did, by necessity. 2. They had to cross Lake Manix at the shallowest place then stayed north of Jade Hill, before turning more south, again by necessity. It still awes me to think how old this trail might be. It makes an arc around something that's not there now. The only barrier that we know of now is Pleistocene Lake Manix. The trail crosses the outlet of the lake, the shallowest place in the lake. They would have only needed the shallowest place if there had of been water. Then stays north of Jade Hill to stay on dry land. There would have been water close on the south side. Is the trail really that old. That is one of the questions. 3. After the Pleistocene the trail they used could have been decided on a whim or dependent upon which trail was in its best shape maintenance-wise.

At Jade Hill, why didn't they go over the northwest shoulder of the hill? They went over other hills, so why didn't they go over this one? It was a gentle hill, and it would have been a little shorter. Again; out on the west end at the classic fork, why didn't they go up the watercourse, over one ridge, then down on the flat. They ended up on that flat. Instead they went over a rocky ridge, turned 80 degrees, went over two more ridges, and then down onto the flat. I wonder if my thought of superstition is close to the reason?

When the trailwalkers braided the trail, I wonder what the reason was? Remember; I said a braid is where there are two trails a step or two apart, or maybe much more. I borrowed the word, braided, from Dan McCarthy, as he has used it. Where they are a step or two apart, I have stood and looked and wondered. Could there have been enough traffic on the trail, that someone had to step off when they passed? Did they pass enough in the same portion of trail to make another trail. The trail is only braided in places. If they did; did they pass on the right, like we drive? Good questions. When the trail is much farther apart I wonder if there wasn't good reasons for it. that are not apparent to us now? They had good reasons for everything they did. I wish we knew more about them.

It has been a real challenge to hunt out and map this trail. It was so easy to start on it that I never thought that it would turn into the major project it has been. I was introduced to it on the west end, so I started walking east. At that time, the west end was plain. After I went passed Jade Hill everything changed. At times I wondered if I would ever find all of it. In time I began to realize that it might be the very old foot trail that became, The Old Spanish Trail. Then I determined that nothing would stop me from finding all of it. That determination was the only thing that kept me going. I didn't want a lot of dotted lines on the map and guesses. I wanted to walk all of it and know. Now I'm glad I did. It has made the effort and time worth it. It has been a rewarding experience. I hope the reader has enjoyed all of the detail that I have tried to gather and write into it.

During the time that it has taken me to collect this trail information, Dee Simpson has been my consultant. She has given help and guided me on much that I have done. I always

knew that if I had trouble, should would tell me what was right. I will always owe her my thanks for her help.

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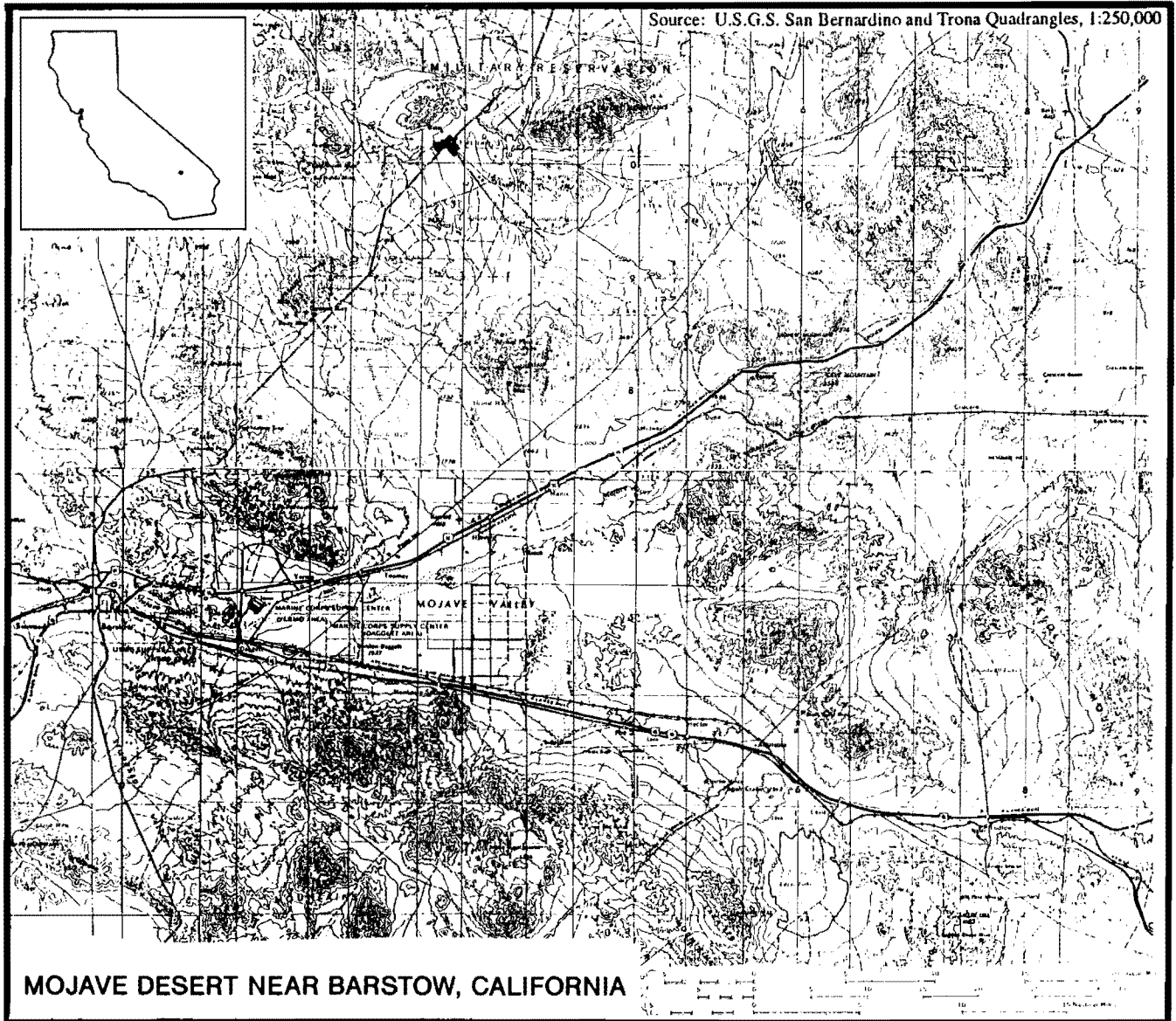
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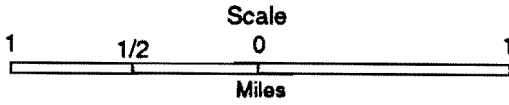
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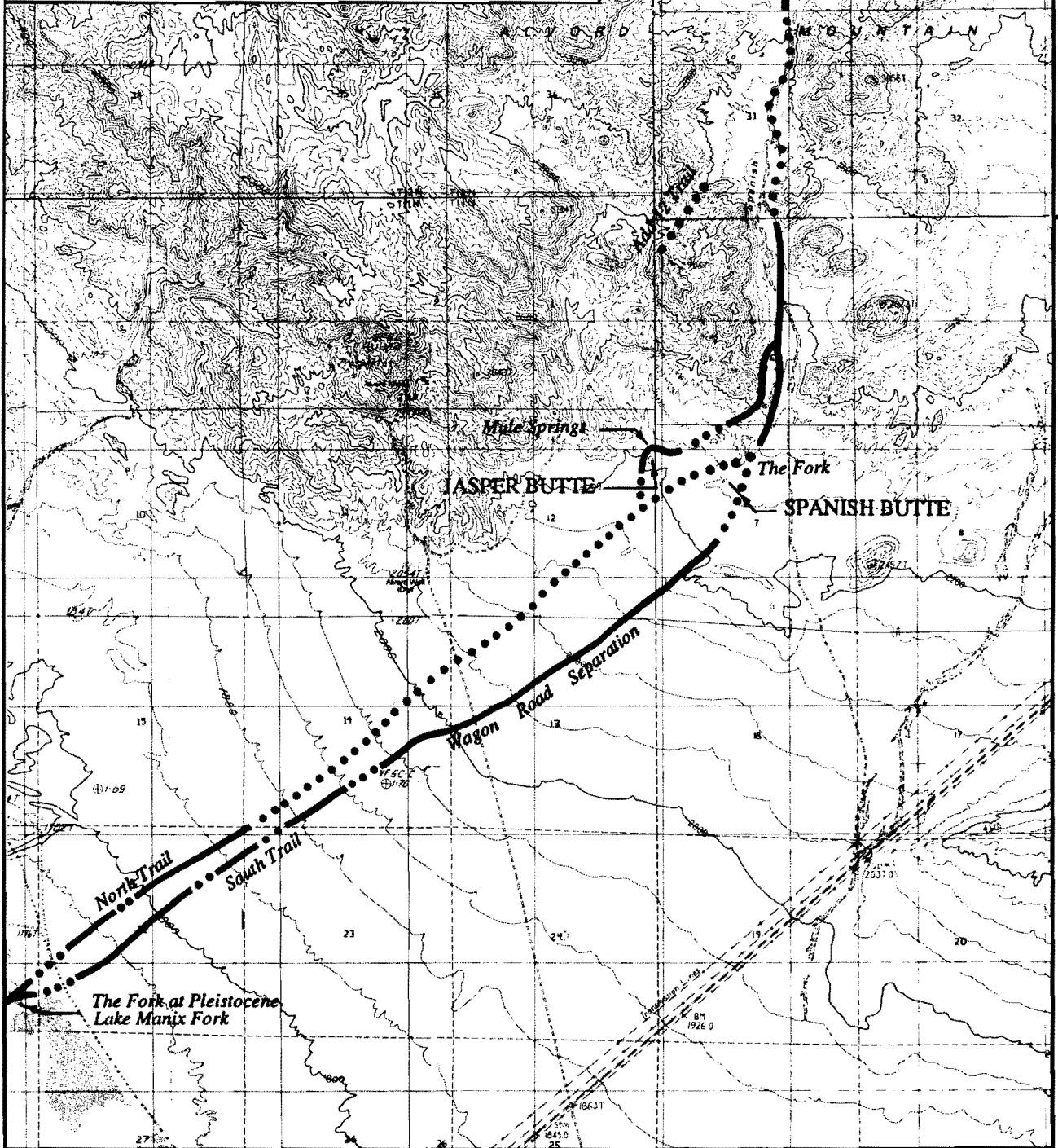


LAKE MANIX TRAIL SYSTEM East Half

- Broken Trail
- Definite Trail



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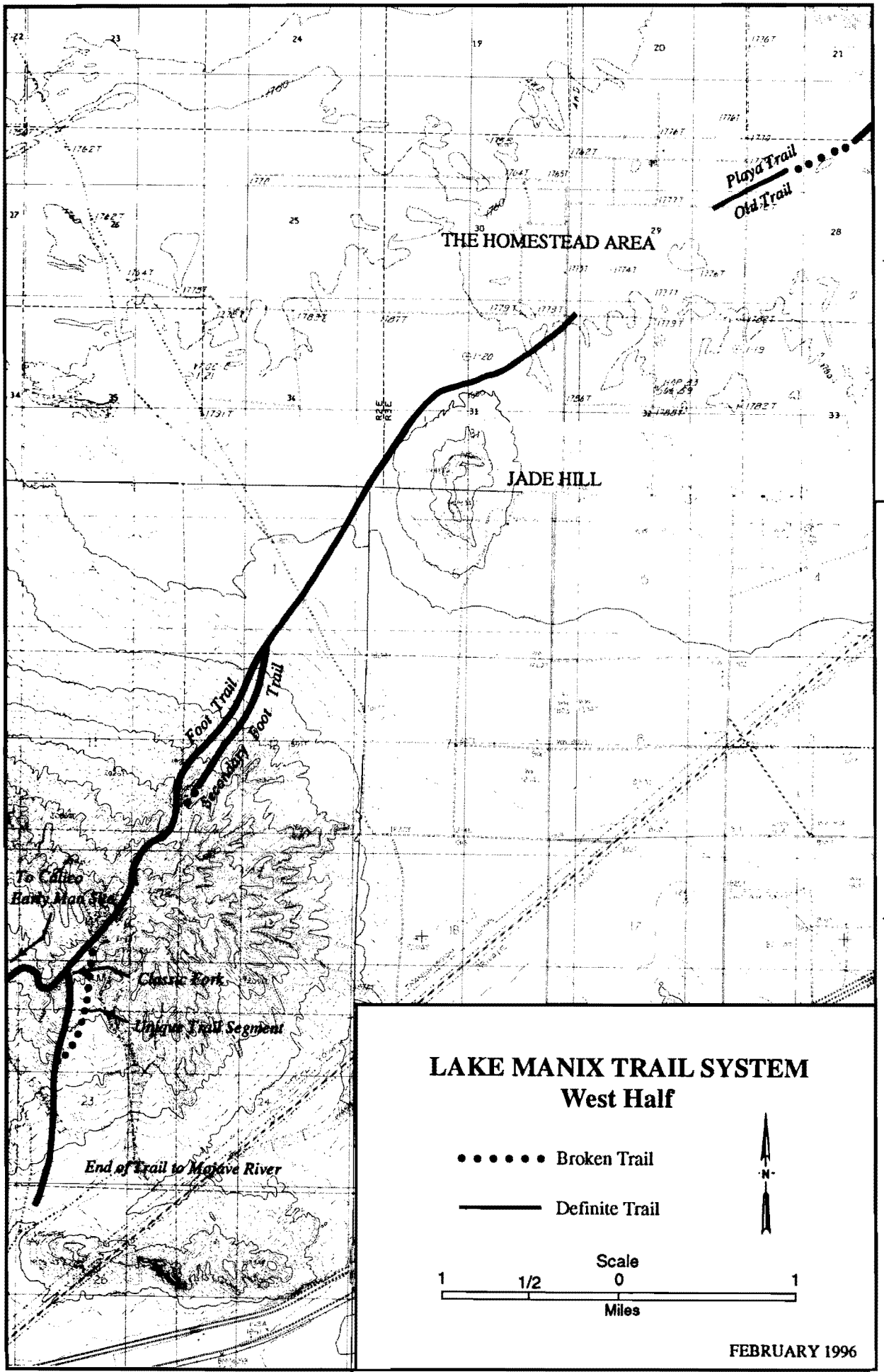
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