APPENDIX 2

CASE STUDIES
OF THE
COMPOSITE TRAIL DESCRIPTION METHODOLOGY

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Mapping and Marking Committee

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After reaching the Humboldt River on the California Trail in present eastern Nevada, emigrants traveled along the north side of the river as far as modern Elko, Nevada. Next they continued traveling either through Carlin Canyon, and making four crossings of the Humboldt River, or bypassed those crossings by taking the Greenhorn Cutoff. By either of these two routes, emigrants came out into a river valley again and usually camped along the river bottoms or around Maggie Creek (known to emigrants as Martins Fork) at the western end of the valley. The present town of Carlin, Nevada, occupies the western end of this valley, a short distance west of Maggie Creek.

The next obstacle emigrants faced was the 18 mile ascent to Emigrant Pass and descent to the Humboldt River at Gravelly Ford. This was necessary to bypass the impassable Palisade Canyon through which the Humboldt flowed. Emigrants began their ascent to Emigrant Pass at the base of the hills just west of modern Carlin. However, most emigrant diarists describing the ascent to Emigrant Pass do not provide enough details to determine exactly where the ascent began. Typically, all these diaries provide is a general statement indicating emigrants left the Humboldt River to travel over the mountains or bluffs to reach the river again at Gravelly Ford.

Nonetheless, close readings of a few diary accounts do reveal where emigrants left the river to ascend to Emigrant Pass. Piecing together descriptive statements in these diary accounts provides enough evidence to locate the initial route to Emigrant Pass. (See the CARLIN WEST QUADRANGLE map at the end of this case study for orientation on the following discussion.)

J. Goldsborough Bruff’s diary accounts get the trail researcher close to the sought after trail location. While camping west of the hot springs that seep from the river banks (just south of where Trails West Marker C-41 is located and Hwy 278 crosses the Humboldt River), Bruff noted on Sep. 7, 1849, that “the trail or road therefore ascends a considerable hill 1/3 mile ahead of us.” The next day he continued, “Made an early move, and in less than half a mile, reach the foot of an ascent 3/4 mile to the top [of the first hill].” As detailed as his ascent account is, it doesn’t indicate the actual route location taken to that hill top. Topographically, there are several possible ways to reach that first “top” in the vicinity Bruff described.

Further investigation into four more detailed diary descriptions revealed the sought after location. The essential diagnostic descriptions are noted in bold lettering with annotations in bracketed italics.

Israel Lord (Sep. 1, 1849):

From this [crossing Maggie Creek] to the foot of the hill, touching a bend of the river by the way, it is three miles, the last mile running nearly west to the foot of a deep ravine through which the road winds up over the first hill by a tolerably easy ascent, and smooth, hard beat, not flinty track. From the foot of the ravine back the route is mostly through a greasewood plain – ahead to the pass [Emigrant Pass] is sage, with very little grass.
J. D. Randall (Aug. 4, 1852):

The camping is good near the river until you reach the Bluffs which is a little over a mile from Currant Creek [Maggie Creek?]. Here you leave the river taking up a ravine over the mountain to the summit [Emigrant Pass] from Currant Cr. 10 ms.

Henry T. Baldy (Aug. 13, 1852):

The road now rises the mountain - Through a ravine, and leaves the river. to a Spring eight miles. Camped above on the Mountain top [near Emigrant Pass].

Thomas Reber, (July 18, 1854):

Tuesday left Camp at 5. after traveling several miles we ascended the bluffs again through a ravine, not Steep nor difficult, …


we left the river to our left. The cause of our leaving the river was the closeing in of the mountains on both sides of the river forming an impassable kanyon. … One mile slightly ascending found us at the mouth of a narrow kanyon, up which we made a steep partly sidling ascent of one mile to the first sumit, then descending a short hill

All four of these diary accounts describe the initial route ascending from the river through a ravine or deep canyon to a first hill or first summit. A search found a ravine that fitted these descriptions. In this ravine were the faint remains of a Class 1 trail ascending to the top. At the base of this ravine Trails West placed a steel-rail Marker C-41A. (See next page for the plotting of this trail segment on CARLIN WEST QUADRANGLE map.)

In addition, there are two other confirmations of this route ascending the ravine:

First, after Israel Lord’s description of ascending the identified ravine, he goes on to describe a way to reach a spring from the top of his “first hill” which ties in with his description of the trail ravine. Lord continued, “There is a very large spring half a mile from the road at the left; to find which you have only to turn down a ravine after crossing the first hill, and follow it until it is intersected by one from the south. Immediately below this, turn to the right directly over the hill twenty or thirty rods [110-165 yards], and you have some good spring water, though not quite cold enough.” Following Lord’s detailed directions, you can readily find his spring, now called “Warm Spring” (in the SW corner of Sec. 5 of the CARLIN WEST QUADRANGLE).

Second, near the head of the ravine that the four diarists had described are two tall rock outcroppings. At the base of one of them, in an eroded out section, is the remains of an emigrant inscription in wagon axle grease, confirming this ravine was used by emigrants.
Figure 1. CARLIN WEST QUADRANGLE with Emigrant Trail
The first emigrant wagons to surmount the Sierra Nevada in 1844 used the nearly impassable upper Truckee River canyon (at the state border between present Nevada and California along the corridor of modern Interstate 80). To bypass this rugged canyon route, Caleb Greenwood opened a wagon trail in 1845 that arched northerly from the Truckee River, in the vicinity of present Verdi, Nevada, to Dog Valley and then bent southerly to the present town of Truckee, California.

Until the mid-1990s, trail historians had long thought the section of this wagon trail to the summit of Dog Valley kept all of the way in the ravine or canyon of the South Branch of Dog Creek, paralleling or under the existing Dog Valley graded dirt road, for about 2.5 miles to the summit. A closer reading of emigrant diaries revealed that emigrants took to a ridge for part of their travel to the summit rather than staying in the canyon bottom the whole way. Then in 1994 the Crystal Peak forest fire burned off all the ground covering vegetation and exposed the area to easier trail searching.

In scouring the ridges on both sides of the canyon, the remains of several old wagon roads were found. However, it was difficult to determine which wagon trace was the original emigrant wagon trail used between 1845 and 1850 (before the development of the Henness Pass Road, the Dutch Flat Wagon Road, and subsequent logging roads). In this case study, it turned out that the GLO plats were of no help in sorting out the origins of these old wagon roads.

As a means of verifying which of the old wagon road remains was the original emigrant trail, over twenty diary accounts were examined, dating from 1846 to 1850, that shed some light on the route of the emigrant trail in this area. From these the nine most diagnostic descriptions of this section of the trail were extracted and listed in a sequence from the Truckee River to the Dog Valley summit, a distance of about four miles.

Based on these sequential diary descriptions, the original emigrant wagon trail was identified in the field. It had taken to the ridge and slopes to the west (from the canyon bottom at its narrowest defile) for 1.5 miles before returning to the wider part of the canyon (about a half-mile from the summit). Much of this route is Class 1 trail. With this composite trail description, the original emigrant trail leading to the Dog Valley summit was distinguished from the other later wagon roads which are still visible on the ridges above the canyon.

The following are these nine diary accounts in chronological order that describe the ascent to the Dog Valley summit. Key diagnostic descriptions are in bold lettering, with internal annotations in bracketed italics and concluding analysis in brackets.

1. Edwin Bryant (Aug. 24, 1846):

   Following the river between two and three miles farther up, we turned abruptly to the right, crossing its channel about the thirtieth time, and through a ravine or gorge ascended the range of mountains on our right. We reached the summit of the range by a comparatively easy and
gradual ascent, **passing over some rocky**, but no difficult places. ... We reached the summit of the gap that afforded us a passage over the mountain, about eleven o'clock, and **descended a long and very steep declivity on the other side**, bringing us into a small, oval-shaped and grassy valley [Dog Valley], with a faint spring branch [Dog Creek] of pure cold water running through it.

[Bryant confirms that initially the trail kept to the South Branch ravine before taking to the ridge to the west and was rocky in places.]

2. **Heinrich Lienhard** (Oct. 1, 1846):

From here [at the 27th crossing where the Truckee River turns south] **our road took us directly up the mountain**, through thick forest, **across a difficult, rocky, mountain slope**. We were in constant fear that the **wheels of our wagon would strike against the giant fir trees on the lower side of the road**. ... After driving upward for some time without making much headway, we reached a grassy and somewhat moist valley [Dog Valley], where we decided to camp.

[Lienhard confirms, again, that the trail took to the mountain slope or ridge, that it was rocky, and adds, importantly, that sections were sidling.]

3. **James Godfrey** (Aug. 8, 1849):

Crossing (last, and 27th time) the road turned to the right and leaving the river, **ascended the mountain through a ravine**. The ascent was **long and somewhat rocky**, though not as difficult as we had anticipated. ... **near the summit**, where we **found some grass and a fine spring**.

[Godfrey confirms, again, that the trail passed through a ravine, the foot of the South Branch, before ascending the mountain slope or ridge, that it was rocky, and adds that a spring is on the route when the trail nears the summit.]

4. **Isaac Jones Wistar** (Aug. 17, 1849):

Leaving it here [the 27th crossing of the Truckee River] we **took up the mountain side through a rough and rocky, but at first not very steep, ravine**. Large pines, firs and cedars abound, especially the first, some of which are fully six feet through. At the head of a fine spring branch we came on a secluded valley [Dog Valley] teeming with black-tail deer, its mountain sides showing three several bands of bighorn. [Wistar confirms that initially the trail went through a rough, rocky, but not very steep ravine, the foot of the South Branch canyon, and then took to the mountain side or ridge.]

5. **Edward C. Harrow** (Aug. 19, 1849):

Road **rough, rocky**, but good. At 4½ [hours] we **descended a small hill but commenced ascending again**, which we continued till 5½ [hours], when we **descended a very steep abrupt and long hill**, into a small but lovely valley [Dog Valley].

[Harrow confirms the trail descended and then quickly ascended as they neared the summit. See Burbank for a similar description.]

We started at daybreak & crossed the river [Truckee River]. The road turned immediately to the right in a north direction & continued for one mile, when it went in a northwest, ascending a spur of mountain, one of the chain of the California mountains. We ascended this [the ridge immediately on the west side of the South Branch canyon], it being in some places very steep, & then again coming upon a little table of land upon which had been good grass, & upon one with a cool but small spring. After rolling there 5 miles, we opened upon a beautiful little valley with a very steep hill to descend to it [Dog Valley].

[Bryarly confirms the location of two tables on the mountain slope, one having a small grassy area and the other having a small spring on or near it.]


Started early this morning and commenced winding up and ascending a very steep mountain, the first ridge we have to pass of the Sierra Nevada. The road is rocky and the side of the mountain covered with a dense growth of pine timber of different kinds ... With much difficulty we reached the summit of the first ridge, seven miles from the Salmon Trout river [Truckee River]. Descended a very steep, difficult mountain into a level valley [Dog Valley] up which we travelled a Southwest course.

[Beesley confirms the trail wound up the mountain slope and was steep and rocky.]

8. Ansel M. McCall (Sept. 5, 1849):

The trail wound up a long and difficult hill this morning and then led down a tremendous steep into a small valley [Dog Valley] where there was some grass and a fine cold spring.

[McCall confirms that the trail was not direct but winding and for him difficult.]

9. Augustus Ripley Burbank (Sept. 7, 1849):

[In the morning he makes the 27th and last fording of Truckee River.] we nooned ½ mile from the ford & near a spring branch (a tributary) [Dog Creek], passing on we commenced ascending the mountain through a thick forest of hearty pine timber. passed over two high elevations & passed to the North of the third & highest elevation. passed a small spring rivulet on the top of the mountain, it crosses the road from the left. descending & passing through a very rocky ravine, we soon came to the mountain descent long & precipitating. we descended to the small beautiful valley [Dog Valley] and encamped along side of the dog spring. ... the road runs N.W. to the valley & springs, then turns short to the South. ... (The springs are 5 miles from the river).

[Burbank’s account is the most descriptive and points out several important details. He confirms the trail passing over two elevations or steps in the ascent, as did Bryarly, and upon reaching the third and highest step he passes around it, not over, to the north, then descends (as did Harrow) to a rocky ravine, which takes him to the summit where he drops down into Dog Valley. Thus, the trail, while ascending most of the way, does descend slightly after reaching his third]
elevation, into a rocky ravine through which he reaches the summit and steep descent to Dog Valley. The fact that the trail is in a rocky ravine (the head of South Branch) to the summit eliminates the possibility of an old wagon swale ascending the hill to the left of the ravine from being the original emigrant trail. Also, Burbank confirms Bryarly passing a small spring outlet upon reaching the second elevation or step, which crossed the trail from left to right, as it does today.]

**Composite Trail Description:**

The following composite account of the key diagnostic diary descriptions that were in bold print was used to locate and verify the trail from the entrance to the South Branch canyon, where Trails West Marker T-24 is located, up to the steep descent to Dog Valley, where Trails West Marker T-26 is located. Refer to these lettered locations and markers on the DOG VALLEY QUADRANGLE map at the end of this case study.

- **A** After the last fording of the Truckee River at or near Crystal Peak Park, the trail turns north, crosses Sunrise Creek, then heads west to enter the ravine of the South Branch of Dog Creek, where Trails West Marker A-24 is located.

- **B** Trail passes through a rocky ravine and ascends the mountain slope. [Bryant, Godfrey, & Wistar]

- **C** On the mountain slope or ridge, the trail is sidling at times. [Lienhard]

- **D** On the mountain slope or ridge, the trail is winding. [Beesley & McCall]

- **E** After reaching the slope or ridge, the trail passes over the first of two elevations. [Burbank]

- **F** After ascending the slope or ridge from the ravine, the trail comes to the first of two little tables with grass on this one. [Bryarly]

- **G** After the trail reaches the second elevation, a small spring outlet crosses the trail from the left to the right. [Burbank]

- **H** The trail reaches the second table where a small spring is located. [Bryarly]

- **I** After ascending the two elevations, the trail passes to the north of a third elevation, that is, goes around the elevated ridge rather than over it. [Burbank]

- **J** The trail gradually descends to and then ascends through a very rocky ravine at the head of the South Branch. [Harrow & Burbank]

- **K** From the summit, the trail descends very steeply to Dog Valley. [Bryant, Harrow, Bryarly, Beesley, McCall, & Burbank]

See the next page for plotting of above lettered descriptions on the DOG VALLEY QUADRANGLE map.
Composite Trail Description Based on Nine Diary Accounts, 1846-1850:

- **A** After the last fording of the Truckee River at or near Crystal Peak Park, the trail turns north, crosses Sanitie Creek, then heads west to enter the ravine of the South Branch of Dog Creek.
- **B** Trail passes through a rocky ravine and ascends the mountain slope. [Bryan, Godfrey, & Wister]
- **C** On the mountain slope or ridge, the trail is siding at times. [Lemhard]
- **D** On the mountain slope or ridge, the trail is winding. [Beeley & McCull]
- **E** After reaching the slope or ridge, the trail passes over the first of two elevations. [Burbank]
- **F** After ascending the slope or ridge from the ravine, the trail comes to the first of two little tables with grass on this one. [Bryant]
- **G** After the trail reaches the second elevation, a small spring outlet crosses the trail from the left to the right. [Burbank]
- **H** The trail reaches the second table where a small spring is located. [Bryant]
- **I** After ascending the two elevations, the trail passes to the north of a third elevation, that is, goes around the elevated ridge rather than over it. [Burbank]
- **J** The trail gradually descends to and then ascends through a very rocky ravine at the head of the South Branch. [Harrow & Burbank]
- **K** From the summit, the trail descends very steeply to Dog Valley. [Bryant, Harrow, Bryan, Beeley, McCull, & Burbank]

**Trail Classifications:**
1. Unaltered Trail
2. Used Trail
3. Verified Trail
4. Altered Trail
5. Approximate Trail

Figure 2. DOG VALLEY QUADRANGLE with Emigrant Trail