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THE HANGING FLUME OF DOLORES RIVER CANYON, MONTROSE COUNTY, COLORADO

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Gold was discovered in the headwaters of the San Miguel River in 1875. Subsequent downstream prospecting led to the discovery of the gold-bearing gravels along the Dolores River, near the confluence with Mesa Creek.

In 1887, the gravels, known as the Long Tree placers, came into the possession of the Montrose Placer Mining Company, capitalized at five million dollars. In a news item in 1887, the *Engineering and Mining Journal* (E&MJ), stated this company claimed to have 2.4 km² of placer ground underlain by gravels 4 to 35 m deep, worth from 50 cents to seven dollars per m³.

After preliminary prospecting, the company decided to build a flume and ditch to a point 17 km upstream on the San Miguel River. The total cost of the project was expected to be about \$75,000 and would consist of half ditching and half fluming. The company anticipated this system would provide enough water under a hydraulic gradient to operate hydraulic mining equipment.

Built in 1889–1890, the flume traversed 10 km of the Dolores River Canyon at an elevation of 30 to 46 m above the river and from 61 to 152 m below the rims of the gorge. It was 1.8 m wide and 1.2 m deep, and was set on sills fastened to the cliff with iron pins and supported on the hanging end by posts of inclined timbers pinned to the cliff. The pins, 4 cm in diameter, were placed in holes drilled to a depth of 46 cm into the sandstone. The drilling was done by hand by men lowered over the cliffs on ropes. A sawmill was established at Pine Flats, Utah near the present site of Buckeye Reservoir to cut lumber. Only the best quality 5-cm thick pine boards were used.

The operations of the Montrose Placer Mining Company were managed by Colonel N. P. Turner, an experienced California miner. Under favorable conditions, with a gang of 12 men, 76 m of flume could be erected in one day. According to legend, Chinese coolies were brought in to work on the flume and died like flies during the construction. The only Chinaman connected with the

job was a cook and the only casualty reported during the construction was the drowning of a worker in the Dolores River while swimming. Construction of the flume used 13,935 m² (1,800,000 board feet) of lumber and cost a purported \$173,000. It carried over 303 million liters of water per day at a grade of 79 cm to the km. The flume was one of the early engineering triumphs in Colorado.

Work at the placers began in the early summer of 1891 utilizing the latest hydraulic equipment. At that time, Colonel Turner estimated the minimum gold content at 25 to 30 cents per m³.

In August, 1891, the E&MJ—quoting local newspapers—reported that the company realized \$80,000 profit after operating only six weeks. Operations were suspended in 1893 as the gravel deposits proved much less extensive, and their value proved to be only a fraction of the company's estimates. The gold was extremely fine and could only be saved with the liberal use of quicksilver.

The gold in the Lone Tree placers undoubtedly was derived from mineralized areas in the headwaters of the San Miguel River and Lake (South) Fork. No placer deposits are known upstream on the Dolores River for many kilometers from its confluence with the San Miguel.

After the flume was abandoned, ranchers in the area salvaged some lumber to construct houses and ranch sheds. Today, the flume is in a deteriorated condition, as several sections have collapsed and fallen into the river, but the basic integrity of the structure remains intact (fig. 1).

SUGGESTED READINGS

- Engineering and Mining Journal, 1890, Flume work of the Montrose Placer Mining Company: *Engineering and Mining Journal*, v. 49, p. 563–565.
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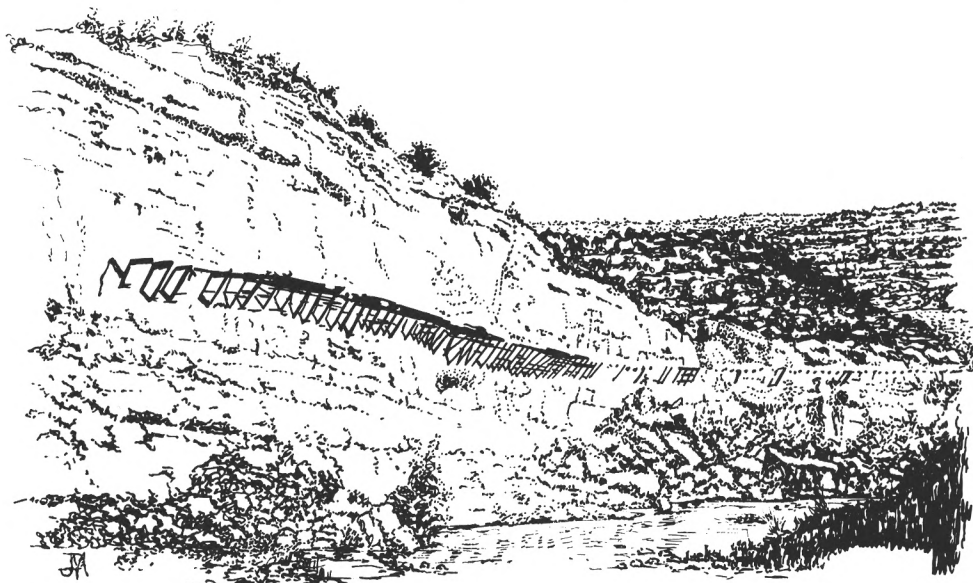


Figure 1. Remains of the hanging flume today (sketch by J. D. Moore).