

Drift Mining in Placer County, The Hogsback: Mine on the Forest Hill Divide.

The Hogsback drift mine, on the Forest Hill divide, Placer county, consists of several locations comprising 682 acres in all. The stock is all held in Paris, France, the name of the company being the "Compagnie des Mines d'Or du Forest Hill Divide," with Eugene Reveney as president. The original company which owned this ground prospected it by a short tunnel and broke through into cement, finding their tunnel too high. They bonded the property to the present company for \$25,000, and a purchase was concluded. The new company commenced work April 28, 1888. They ran a 7x8 tunnel 80 feet lower than the old one, and broke through into cement. At 1100 feet they made an upraise of 15 feet in bedrock without striking cement, and at 1320 feet they sank: four shafts and two stopes a total depth of 226 feet below the bottom of the end of the tunnel, struck 20 miners' inches of water and were "drowned out." The pitch of the bed rock to where they broke through was an average of 38°, and washed very smooth. This tunnel had to be abandoned as not low enough to bottom the channel. Work on the tunnel was commenced by hand on May 18, 1888. A distance of 248 feet was run by hand, three shifts, of five men each, laying their own track and removing their own dirt. The average distance made per week by hand was 35.4 feet. The following statement shows the greatest week's work by hand:

PROGRESS FOR A WFEK 48.7 FEET.

12 men, 7 days (84 days), at \$3	\$252.00
3 men, 7 days (21 days). at \$3.25	68.25
1 man, 7 days (7 days), at \$3.50	24.50
114 lbs. safety niter powder No. 2, at 13c. per lb.	20 52
350 feet triple taped fuse, at 72 c. per 100 feet	2 52
50 lbs. chemical wax candles, 14 oz , at 13c. per lb	6 62
2 boxes XXX blasting caps, at 80c. per box	1.60
224 feet lumber, at \$22.50 per M	5.04
1040 lbs. steel rails (16 lb) (195 ft.) at 4c. per lb..	41.80
Bolts and fish-plates, at 50e, per pair	4.00
Car oil	.15
40 bushels charcoal, at 20e. per bushel	8.00
Wear and tear, etc	1.00
Total cost	\$435.80
Cost per foot	\$8.94

Not a timber was used in this ground, and it is still standing without any.

On the 8th of July, 1888, the Ingersoll straight-line air-compressor, class A, was started, and by December 27th the tunnel had reached a length of 1559.6 feet.

At a distance of 1320 feet, they broke through into a hard mountain cement, and anticipated making greater headway, but found it was very nearly as costly as the rock. During

the time they were in bedrock the average progress per week with machine drills was 58.94 feet for 1320.7 feet of tunnel, requiring but 21 sets of timbers, showing that the ground is not soft. Average numbers of holes per shift 10, blasting the cut and top holes first, bottom holes afterward. The two largest runs made for two consecutive weeks were 73.6 feet for the week ending August 4th, and 66.9 feet for the week ending 11th, or respectively, 10.51 and 9.55 feet per diem.

The tunnel runs diagonally across the strike of the rock (the strike, however, varying very much, sometimes being at right angles with the tunnel), which is composed of alternate strata of slate, diorite, and some white barren quartz.

The regular force of men employed consists of 15 miners working 8 hours per day; 2 engineers, working 12 hours per day; 2 drivers, working 12 hours per day; two blacksmiths, working 10 hours per day; one timberman, working 10 hours per day, divided into three shifts, and working two 3 ½ -inch Ingersoll Eclipse drills on columns.

They have three 3 ½ -inch Ingersoll Eclipse drills, and the total cost for all extras for 1559.6 feet of tunnel was \$132,75. A stringent rule was enforced, requiring each drill to be taken out and thoroughly cleaned once a week.

The actual cost of the 1559.6 feet of tunnel, 7x8 feet, exclusive of management, up to Dec. 27, 1888, was as follows:

		Cost per running foot.
Total labor (including timbering)	\$12,131.49	\$7.77
Powder. 10,021 lbs., at 14 ¾ (delivered)	1,478.10	.90
Fuse, 23,045 ft., at 54 1/2 per 100, and caps, \$40	165 59	,10
Wood, 522 cords of wood, at \$2 75 (delivered)	1,435.50	.92
Charcoal, 1,580 bushels, at 20c	316.00	.20
Candles, 1755 lbs., at 13 ¼ c net	232 53	.14
Gang planks and ties, 7624 ft. at \$22.60 per M	171.54	.10
Timbers, 21 sets, at \$1.80 per set	37.80	.02
Steel rails, etc (16 lbs.) 20,048 lbs. at 4c. net	801.92	.51
1800 ft, 3 in. \$531.00		
Air and 1700 ft., 1 in, 106.25	761.43	.48
Water pipes Freight on same 124.18		
Horse feed, hay, 21.; barley. 3c. per lb.	349.60	.22
Materials, steel drill parts, oil, tools, etc.	916 33	.58
Totals	\$14,797.83	\$11.94
Actual cost per running foot	11.94	

These tables of progress and cost of tunneling are of great interest to drift miners in this State.

As stated, however, this tunnel was found to be too high, and was abandoned, and another one was started 437 feet lower, at an elevation of 4340 feet above sea level. This new tunnel was started Oct. 18, 1889, and is now in 1230 feet. It will be 2520 feet long when completed to the point where the upraise will be made to cap the channel of auriferous gravel. This upraise will be 190 feet. The course is diagonally across the strike of the rock which is harder than in the upper tunnel. The new tunnel is 7x8 in the clear with a three-inch grade to 100 feet. For the tracks, 16-pound steel rails are used, and the iron oars hold 2200 pounds of slate bedrock. Horses are used to haul the cars.

The air compressor is 600 feet above the present tunnel, where the works are. Air is carried in a three-inch pipe. An 18-inch Pelton wheel at the tunnel mouth runs a Sturtevant blower, by water that is brought in an inch and a half pipe from the upper tunnel.

The energetic young superintendent, Mr. W. O. Ralston, kept the work going during the whole of this exceptionally rough winter. John C. McFaull, the foreman, is the young man who had charge of the Horseshoe Bar tunnel, below Forest Hill, For nine weeks one shift of men had to be kept shoveling away snow so that the cars could be dumped, A tunnel was made through the snow to the blacksmith shop. They had 18 feet of snow at the tunnel mouth in the ravine, and 21 feet at the office. On the first page of this week's Press is a photo-facsimile of the mouth of the tunnel of this mine, made from a photograph taken by Mr. Ralston before the snows set in. Last month they made 217 feet of progress and expect to get in and begin the upraise by the last of October.

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