

H. T. Mercer

COPPER RANGE COMPANY

Houghton, Michigan,
November 23, 1937.

The Frank A. Douglass Agency,
Houghton, Michigan.

Gentlemen:

Subject: Fire loss at Victoria Mine
No. 2 shaft-house and rock-house.

Supplementing my letter to you of October 29, 1937, with reference to the above fire loss, you will receive with this letter a statement, in duplicate, of the cost of replacing item No. 76, which is building No. 157, known as No. 2 shaft-house and rock-house at Victoria Mine, which statement covers both the building and machinery therein, the total replacement cost of which we estimate to be \$42,596.17.

Will you please give the matter of the adjustment of this loss your further attention?

Yours very truly,

Copies to:
Mr. William H. Schacht, President,
Mr. H. T. Mercer, Chief Engineer,
Mr. E. W. Kruka, Chief Clerk,
Mr. E. D. Noetzel, Purchasing Agent.

John M. Wagner,
Asst. Treasurer.

JMW/CLM

COPPER RANGE COMPANY

Memorandum of Cost of Replacing No. 2 Shaft-House and Rock-House at Victoria Mine
which building was destroyed by fire Thursday, October 28, 1937, about 1:00 o'clock a.m.

Base dimension of shaft-house: 80 feet x 48 feet
Base dimension of rock-house: 54 feet x 50 feet
Type of construction: Wooden frame with corrugated steel roof-covering

Details of construction and cost of replacement

<u>Number of pieces</u>	<u>Size of material</u>	<u>Kind of material</u>	<u>Quantity in feet b.m.</u>	<u>Unit price per M feet</u>	<u>Cost or value</u>
22	14 x 14 - 12	Douglas fir, for sills	4,312	\$44.50	\$ 191.88
8	14 x 14 - 10	" " " "	1,307	44.50	58.16
4	14 x 14 - 20	" " " "	1,307	44.50	58.16
28	14 x 14 - 32	" " " posts	14,635	44.50	651.26
14	14 x 14 - 20	" " " "	4,573	44.50	203.50
7	14 x 14 - 16	" " " "	1,829	44.50	81.39
7	14 x 14 - 14	" " " "	1,601	44.50	71.24
73	14 x 14 - 12	" " " girders and beams	14,308	44.50	636.71
20	14 x 14 - 30	" " " " " "	9,800	44.50	436.10
11	14 x 14 - 24	" " " " " "	4,312	44.50	191.88
15	14 x 14 - 10	" " " " " "	2,450	44.50	109.03
4	14 x 14 - 36	" " " " " "	2,352	44.50	104.66
32	12 x 12 - 16	" " " posts	6,144	44.50	273.41
14	12 x 12 - 12	" " " "	2,016	44.50	89.71
4	12 x 12 - 18	" " " "	864	44.50	38.45
4	12 x 12 - 10	" " " "	480	44.50	21.36
4	12 x 12 - 32	" " " beams	1,536	44.50	68.35
7	12 x 12 - 30	" " " "	2,520	44.50	112.14
7	12 x 12 - 20	" " " "	1,680	44.50	74.76
26	12 x 12 - 12	" " " "	3,744	44.50	166.61
4	12 x 12 - 10	" " " "	480	44.50	21.36
		Footing	82,250 ft.		\$ 3,660.12

Details of construction and cost of replacement, continued

<u>Number of pieces</u>	<u>Size of material</u>	<u>Kind of material</u>	<u>Quantity in feet b.m.</u>	<u>Unit price per M feet</u>	<u>Cost or value</u>
12	12 x 12 - 16	Douglas fir, for trusses	2,304	\$44.50	\$ 102.53
6	12 x 12 - 14	" " " "	1,008	44.50	44.86
6	12 x 12 - 16	" " " "	1,152	44.50	51.26
8	12 x 12 - 8	" " " "	768	44.50	34.18
12	8 x 8 - 16	" " " "	1,024	44.50	45.57
12	6 x 6 - 4	" " " "	144	44.50	6.41
4	12 x 12 - 21	" " " caps	1,008	44.50	44.86
8	12 x 12 - 12	" " " "	1,152	44.50	51.26
4	12 x 12 - 10	" " " sheave supports	480	44.50	21.36
8	12 x 12 - 16	" " " " "	1,536	44.50	68.35
4	12 x 12 - 32	" " " purlins	1,536	44.50	68.35
4	10 x 10 - 32	" " " "	1,067	44.50	47.48
8	12 x 12 - 14	" " " crusher supports	1,344	44.50	59.81
60	12 x 12 - 16	" " " bin supports	11,520	44.50	512.64
6	12 x 12 - 12	" " " " "	864	44.50	38.45
4	12 x 12 - 10	" " " " "	480	44.50	21.36
8	10 x 10 - 10	" " " " "	667	44.50	29.68
1	10 x 10 - 24	" " " " "	200	44.50	8.90
1	10 x 10 - 16	" " " " "	133	44.50	5.92
2	10 x 10 - 14	" " " " "	233	44.50	10.37
1	10 x 10 - 8	" " " " "	67	44.50	2.98
8	8 x 10 - 18	" " " " "	960	44.50	42.72
2	8 x 10 - 10	" " " " "	133	44.50	5.92
4	8 x 12 - 12	" " " " "	384	44.50	17.08
8	8 x 8 - 20	" " " " "	853	44.50	37.96
2	8 x 8 - 12	" " " " "	128	44.50	5.70
2	6 x 8 - 12	" " " " "	96	44.50	4.27
9	12 x 12 - 36	" " " drop hammer pier	3,888	44.50	173.02
180	6 x 8 - 16	" " " bracing	11,520	44.50	512.64
21	8 x 8 - 16	" " " "	1,792	44.50	79.74
5	6 x 6 - 10	" " " "	150	44.50	6.68
Footings			48,591 ft.		\$ 2,162.31

Details of construction and cost of replacement, continued

<u>Number of pieces</u>	<u>Size of material</u>	<u>Kind of material</u>	<u>Quantity in feet b.m.</u>	<u>Unit price per M feet</u>	<u>Cost or value</u>
16	6 x 10 - 8	Douglas fir, for skip dumps	640	\$44.50	\$ 28.48
8	6 x 10 - 6	" " " " "	240	44.50	10.68
16	6 x 10 - 4	" " " " "	320	44.50	14.24
8	6 x 10 - 12	" " " " "	480	44.50	21.36
16	6 x 6 - 6	" " " " "	288	44.50	12.82
4	12 x 12 - 96	" " " stringers and braces	4,608	44.50	205.06
16	8 x 10 - 10	" " " " " "	1,067	44.50	47.48
726	2 x 6 - 16	Hemlock, for studding	11,616	39.25	455.93
238	2 x 6 - 12	" " "	2,856	39.25	112.10
200	2 x 6 - 16	" " rafters	3,200	39.25	125.60
70	2 x 6 - 10	" " "	700	39.25	27.48
12	6 x 6 - 12	Douglas fir, for sheave house	432	44.50	19.22
12	6 x 6 - 10	" " " " "	360	44.50	16.02
20	6 x 12 - 16	" " " joists	1,920	44.50	85.44
120	3 x 12 - 16	" " " "	5,760	44.50	256.32
	1 x 8 - 12-16	Hemlock shiplap, for sheathing	19,000	44.25	840.75
	$\frac{1}{2}$ x 6 - 12-16	White pine siding	18,000	54.25	976.50
	2 x 6 and wider	Hemlock plank, for bin lining	13,872	39.25	544.48
	3 x 6 " "	" " " " "	5,524	39.25	216.82
	3 x 8 and wider	Hemlock plank, for flooring	9,600	39.25	376.80
	2 x 8 " "	Maple " " "	6,400	44.25	283.20
42	8 x 8 - 12	Cedar flat timber	2,688	24.25	65.18
	2 x 12 - 16	Common white pine, for stairs	1,472	54.25	79.86
	2 x 8 - 16	" " " " "	704	54.25	38.19
		Footing	111,747 ft.		\$ 4,860.01

Details of construction and cost of replacement, continued

4.

<u>Number of pieces</u>	<u>Size of material</u>	<u>Kind of material</u>	<u>Quantity in feet b.m.</u>	<u>Unit price per M feet</u>	<u>Cost or value</u>
8	12 x 12 - 20	Douglas fir, for posts and trusses	1,920	\$44.50	\$ 85.44
12	12 x 12 - 16	" " " " " "	2,304	44.50	102.53
4	12 x 12 - 20	" " " " " "	960	44.50	42.72
8	12 x 12 - 22	" " " " " "	2,112	44.50	93.98
8	12 x 12 - 14	" " " " " "	1,344	44.50	59.81
4	8 x 8 - 20	" " " " " "	427	44.50	19.00
23	6 x 8 - 16	" " " " " "	1,472	44.50	65.51
10	8 x 8 - 8	" " " " " "	427	44.50	19.00
10	8 x 8 - 18	" " " " " "	960	44.50	42.72
220	2 x 6 - 20	Hemlock, for studding and rafters	4,400	39.25	172.70
260	2 x 6 - 18	" " " " " "	4,680	39.25	183.69
45	2 x 6 - 16	" " " " " "	720	39.25	28.26
	3 x 8 and wider	Hemlock plank, for floors	8,100	39.25	317.93
57	8 x 8 - 12	Cedar flat timber, for flooring	3,648	24.25	88.46
	1 x 8	Hemlock shiplap, for sheathing	12,680	44.25	561.09
	$\frac{1}{2}$ x 6	Common white pine siding	<u>6,800</u>	54.25	<u>368.90</u>
		Footing	52,954 ft.		\$ 2,251.74

Summary of Timber Construction

Page 1,	Fir timber, etc.	82,250 ft.	\$ 3,660.12
Page 2,	" " "	48,591 "	2,162.31
Page 3,	Fir timber, hemlock and maple plank, etc.	111,747 "	4,860.01
Page 4,	Fir timber, hemlock, cedar, white pine, etc.	<u>52,954 "</u>	<u>2,251.74</u>
		295,542 "	\$12,934.18
	Add for wastage, 5% of 295,542 feet	<u>14,777 "</u>	<u>646.64</u>
		310,319 ft.	\$13,580.82
	Add for carpenter labor at \$25.00 per M ft. of lumber		<u>7,757.97</u>
		Footing	\$21,338.79

<u>Quantity</u>	<u>Other material and equipment</u>	<u>Unit price</u>	<u>Cost or value</u>
135 only	C.I. brackets, size 12 x 12 x 14	‡ 4.40	‡ 594.00
8 only	10" steel I-beams, each 16' 0" long, 4,480 lbs. (Supports)	3.55	159.04
99 squares	No. 26 ga. galvanized corrugated sheet steel	6.25	618.75
8 only	loading chutes, of steel construction	200.00	1,600.00
2 only	bin chutes, of steel construction	100.00	200.00
28 only	windows, 10 x 12 - 12 light, 1-3/8", check rail, glazed	3.08	86.24
3 only	doors, 3' 0" x 6' 8", 1-3/4" thick	7.59	22.77
2 only	doors, 8' 0" x 8' 0", 1-3/4" thick	19.53	39.06
2 only	sash, 10 x 12 - 6 light, 1-3/8", glazed	1.54	3.08
Cost of	hardware, including nails, bolts, etc.		164.00
Cost of	electric wiring and electric lamps, estimated		300.00
Cost of	painting, including labor and material, 2,900 sq. yds. @ 30¢		<u>870.00</u>
	Footing		‡4,656.94

Description of machinery and equipment

One only	18" x 24" Blake type rock crusher, complete with pulleys and all accessories	\$3,250.00	
	Transportation charges to Rockland	110.40	
	Drayage Rockland to Victoria	96.00	
	Cost of installation	<u>168.00</u>	\$ 3,624.40
One only	13" x 20" Blake type rock crusher, complete with pulleys and all accessories	\$2,143.00	
	Transportation charges to Rockland	69.00	
	Drayage Rockland to Victoria	60.00	
	Cost of installation	<u>144.00</u>	\$ 2,416.00
One only	double cylinder friction drum hoisting engine, size 6" x 8", complete with all accessories	\$ 800.00	
	Transportation charges to Rockland	22.40	
	Drayage Rockland to Victoria	8.00	
	Cost of installation	<u>48.00</u>	\$ 878.40
One only	traveling bridge crane, 20 ft. span, 10-ton capacity	\$1,316.40	
	Transportation charges to Rockland	61.93	
	Drayage Rockland to Victoria	8.78	
	Cost of installation	<u>48.00</u>	\$ 1,435.11
One only	traveling bridge crane, 20 ft. span, 4-ton capacity	\$ 503.00	
	Transportation charges to Rockland	29.20	
	Drayage Rockland to Victoria	4.14	
	Cost of installation	<u>24.00</u>	\$ 560.34
Six only	air hoists, size 10" dia. x 60" lift @ \$105.75	\$ 634.50	
Two only	" " " 8" " x 60" " @ 79.75	159.50	
One only	" " " 12" " x 60" "	134.50	
One only	" " " 6" " x 60" "	54.00	
One only	" " " 6" " x 36" "	49.00	
Two only	" " " 4" " x 48" " @ 42.00	84.00	
	Transportation charges to Rockland	85.68	
	Drayage Rockland to Victoria	3.85	
	Cost of installation	<u>24.00</u>	\$ 1,229.03
	Footing		\$10,143.28

Description of of machinery and equipment, continued

One only	I-beam trolley, complete with 10" I-beam track, 34' 0" long, complete with 3-ton capacity hoist	\$ 198.20	
	Transportation charges to Rockland	15.14	
	Drayage Rockland to Victoria	2.80	
	Cost of installation	<u>24.00</u>	\$ 240.14
One only	C.R. steel shaft, 3-7/16" dia., 43' 0" long	\$ 70.72	
One only	C.I. flange coupling, for 3-7/16" dia. shaft	25.95	
Eight only	C.I. pillow blocks, for 3-7/16" dia. shaft	128.80	
One only	C.I. pulley, 6-arm, 72" dia. x 12" face, f.o.b. Rockland	87.66	
Two only	" " " 60" " x 12" " " "	135.81	
Two only	" " " 56" " x 12" " " "	60.75	
	Transportation charges to Rockland (1st 3 items only)	21.85	
	Drayage Rockland to Victoria (1st 3 items only)	1.27	
	Cost of installation	<u>144.00</u>	\$ 676.81
Two only	bicycle type hoisting sheaves, heavy design, 10 ft. dia., complete with shaft and pillow blocks @ \$335.00	\$ 670.00	
	Transportation charges to rockland	21.62	
	Drayage Rockland to Victoria	18.80	
	Cost of installation	<u>96.00</u>	\$ 806.42
One only	drop hammer, size 3,000 lbs., complete with anvil block and dies	\$ 810.00	
	Transportation charges to Rockland	24.38	
	Drayage Rockland to Victoria	21.20	
	Cost of installation	<u>168.00</u>	\$ 1,023.58
Four only	12" x 8 ply Leviathan belts, each 57' 6" long, @ \$131.10	\$ 524.40	
	Transportation charges to Rockland	6.21	
	Drayage Rockland to Victoria	.36	
	Cost of installation	<u>8.00</u>	\$ 538.97
Two only	ore grizzlies:		
	8 only 12 x 12 - 8 Douglas fir 768 ft. @ \$44.50 M	\$ 34.18	
	8 only 3 x 12 - 20 hard maple 480 " @ 44.50 "	21.36	
	4 only 1/4 x 24 - 19 steel plate 1,550 lbs. @ 4.24 cwt.	65.72	
	22 bars 4" diameter round mild steel 17,861 " @ 4.44 "	793.03	
	Add for labor, 25% of the cost of material	<u>228.57</u>	\$ 1,142.86
	Footing		\$ 4,428.78

Recapitulation of all Costs

Timber construction, pages 1 to 4, as summarized on page 4	\$21,338.79
Miscellaneous other items of construction, as set forth on page 5	4,656.94
Machinery and equipment, as set forth on page 6	10,143.28
Additional machinery and equipment, as set forth on page 7	<u>4,428.78</u>
Footing	\$40,567.79
Add for engineering and superintendence, 5% of \$40,567.79	<u>2,028.38</u>
Total estimated cost of replacement	\$42,596.17