Cliffs Shaft Mine.

MACHINERY SUPPLIES(CONTINUED).

		Amount For'd			264.80
29	¼"	Elbows	.05	1.45	
11	3/8"	"	.05	.55	
4	½"	"	.06	.24	
83	3/4"	"	.08	6.64	
1	1"	"		.11	
39	1¼"	"	.16	6.24	
4	1½"	"	.20	.80	
5	2"	"	.28	1.40	
12	2½"	"	.50	6.00	
15	3"	"	.75	11.25	
1	4"		1.20	1.20	
1	5"	"	2.00	2.00	
1	6"	"	2.75	2.75	
6	7"	"	4.70	28.20	
1	8"	"	6.75	6.75	
1	12"	"	20.00	20.00	
2	1"	45° Elbows	.15	.30	
1	1¼"	" "		.19	
1	2"	" "		.34	
4	2½"	" "	.60	2.40	
2	4"	" "	1.45	2.90	
3	5"	" "	2.50	7.50	
1	8"	" "		8.50	
				117.71	
		Less 75 & 5%		89.75	27.96
1	1½ to 2	Reducers		.50	
1	2 " 3	"		1.00	
1	2 " 1	"		.40	
				1.90	
		Less 75 & 5%		1.45	.45 28.41
				Total	28.41
		Amount For'd			293.21

Cliffs Shaft Mine.

MACHINERY SUPPLIES(CONTINUED).

		Amount For'd			293.21
7	3/8" Plugs	.02	.14		
12	½" "	.02	.24		
48	3/4" "	.03	1.44		
17	1" "	.04	.68		
29	1¼" "	.05	1.45		
32	1½" "	.07	2.24		
23	2" "	.10	2.30		
14	2½" "	.18	2.52		
22	3" "	.25	5.50		
1o	5" "	.88	8.80		
5	6" "	1.20	6.00		
1	8" "		2.75		
1	10" "		3.75		
1	12" "		4.25		
			42.06		
	Less 75 - 10 & 5%		33.05	8.99	
6	¼" Nipples	.05	.30		
2	3/8" "	.06	.12		
13	½" "	.07	.91		
23	3/4" "	.08	1.84		
9	1" "	.10	.90		
12	1¼" "	.14	1.68		
6	1½" "	.17	1.02		
2	2" "	.26	.52		
10	2½" "	.41	4.10		
36	3" "	.52	18.72		
5	4" "(Long)	.80	4.00		
15	5" "(Short)	1.42	21.30		
1	5" "(Long)	1.80	1.80		
15	6" " (Short)	1.77	26.55		
5	7" " (Short)	2.15	10.75		
			94.51		
	Less 80%		75.61	18.90	27.89
			Total	27.89	

Total For'd 321.10

Cliffs Shaft Mine.

MACHINERY SUPPLIES(CONTINUED).

		Amount For'd				321.10
2	10"	Nipples	Old Net		2.50	
1	12"	"	" "		1.50	
3	¼"	Tees		.07	.21	
48	3/8"	"		.08	3.84	
112	½"	"		.09	10.08	
100	3/4"	"		.13	13.00	
22	1"	"		.20	4.40	
					31.35	
26	1¼"	"		.23	5.98	
28	1½"	"		.29	8.12	
51	2"	"		.41	20.91	
17	2½"	"		.67	11.39	
10	3"	"		1.10	11.00	
2	4"	"		1.75	3.50	
11	5"	"		2.80	30.80	
3	6"	"		4.00	12.00	
					103.70	
					31.53	
					135.23	
		Less 75 & 5%			103.11	32.12
5	6 X 4 X 4	Tees		4.60	23.00	
2	12 X 4 X 4	Tees		33.50	67.00	
					90.00	
		Less 75%			67.50	22.50 58.62
					Total	58.62

Amount For'd 379.72

Cliffs Shaft Mine.

MACHINERY SUPPLIES(CONTINUED).

			Amount For'd			379.72
16	¼"	Unions Malleable	.18	2.88		
25	3/8"	" "	.20	5.00		
41	½"	" "	.22	9.02		
2	1"	" "	.33	.66		
27	1¼"	" "	.46	12.42		
8	1½"	" "	.60	4.80		
12	2"	" "	.80	9.60		
				44.38		
23	2½"	" "	1.50	34.50		
5	3"	" "	2.10	10.50		
				45.00		
				44.38		
				89.38		
		Less 80%		71.50	17.88	
5	1"	Caps	.12	.60		
		Less 75 & 5%		.46	.14	
1	1"	Return Bend		.22		
		Less 75 & 5%		.17	.05	
1	2½"	Crane Safety Pop Valve				18.07
				Total	18.07	
			Amount For'd			397.79

Cliffs Shaft Mine.

MACHINERY SUPPLIES (CONTINUED)

			Amount For'd			397.79
42	Prs.	3/4"	Flange Unions	.46	19.32	
9	"	1"	" "	.52	4.68	
57	"	1¼"	" "	.64	36.48	
47	"	1½"	" "	.78	36.66	
3	"	2"	" "	1.00	3.00	
21	"	2½"	" "	1.25	26.25	
6	"	3"	" "	1.50	9.00	
2	"	4"	" "	2.10	4.20	
18	"	5"	" "	3.15	56.70	
2	"	7"	" "	5.50	11.00	
7	"	12"	" "	16.00	112.00	
					319.29	
			Less 75 & 10%		247.45	71.48
14	½"		Globe Valves	.72	10.08	
1	3/8"		" "		.77	
13	½"		" "	1.00	13.00	
33	3/4"		" "	1.26	41.58	
2	1"		" "	1.80	3.60	
17	1¼"		" "	2.52	42.84	
15	1½"		" "	3.50	52.50	
16	2"		" "	5.30	84.80	
					249.17	
			Less 70%		164.32	74.75 146.59
					Total	146.59
			Amount For'd			544.38

Cliffs Shaft Mine.

MACHINERY SUPPLIES(CONTINUED).

				Amount For'd		544.38
1	¼"	Angle Valve	.72	.72		
5	3/8"	" "	.77	3.85		
4	½"	" "	1.00	4.00		
11	3/4"	" "	1.26	13.86		
3	1"	" "	1.80	5.40		
6	1½"	" "	3.50	21.00		
4	2"	" "	5.30	21.20		
				70.03		
		Less 70%		49.02	21.01	
2	1¼"	Gate Valves	3.50	7.00		
3	1½"	" "	5.00	15.00		
1	2"	" "	7.50	7.50		
				29.50		
		Less 70 & 10%		21.53	7.97	
6	2½"	Iron B. Globe Valves	7.35	44.10		
4	3"	" " "	9.60	38.40		
1	4"	" " "		21.00		
				103.50		
		Less 75 & 5%		78.92	24.58	53.56
				Total	53.56	
				Amount For'd		597.94

Cliffs Shaft Mine.

MACHINERY SUPPLIES(CONTINUED).

		Amount For'd			597.94
2	2½" Ludlow I.B. Gate Valves	4.87	9.74		
1	2" Iron Check Valve, Old				
3	3/4" Hor. Brass Check V.	1.15	3.45		
2	1" " " "	1.60	3.20		
10	1¼" " " "	2.25	22.50		
2	2" " " "	4.75	9.50		
			38.65		
	Less 70%		27.05	11.60	
5	3/4" Brass Cocks	1.70	8.50		
3	1" " "	2.35	7.05		
3	1¼" " "	3.70	11.10		
3	1½" " "	4.85	14.55		
3	2" " "	7.30	21.90		
			63.10		
	Less 75 & 10%		48.90	14.20	
11	¼" Air Cocks	.40	4.40		
17	3/8" " "	.50	8.50		
			12.90		
	Less 70%		9.03	3.87	
1	2½" Wind Bore Copper		1.50	1.50	
1	1¼" Wind Bore Iron				
1	3" " " "				
1	4" " " "				
1	5" " " "		2.25	2.25	
2	6" " " "	2.50	5.00	5.00	
1	8" " " "				
1	Doz. Sight Feed Oil Cups			15.00	
38#	Iron Pump Valves		2.40	.91	64.07
			Total	64.07	

Amount For'd 662.01

Cliffs Shaft Mine.

MACHINERY SUPPLIES(CONTINUED).

			Amount For'd		662.01
		ROUGH	CASTINGS.		
27	Upper Heads	216#			
24	Steam Chests	207#			
9	Ratchet Boxes	135#			
5	Valve Seats	54#			
3	Buffer Yokes	11			
	Tripod Centers	373			
	Shell Slides	669#			
	Shells	750#			
	C. & H. Rings	25#			
5	Cylinders #3	425#			
8	Lower Heads	118#			
33	#217 Bushings	216#			
	Rand Drill Tripod Weights	2750#			
	Steel Bushings	550#			
		6499#	2.40	155.98	
4	Mine Car. Pillow Blks.	50#			
1	Pile Driver Head				
	Car Box Castings	34			
2	Fire Door Liners	74			
	Grate Bars	1404			
	Side Casting for Corliss	87			
	Wheelborrow Wheel Boxes	165			
	Wheelborrow Wheels	1021			
	Crusher Car	367			
	12" X 3" Mine Car	560			
	12" X 3" S.O. Car	581			
2	Rear Skips	156			
3	Hand Hole Crabs	14			
		4513#	2.40	108.31	264.29
			Total	264.29	
			Amount For'd		926.30

Cliffs Shaft Mine.

MACHINERY SUPPLIES(CONTINUED).

	Amount For'd			926.30
	Fire Door Frames	443#		
	Mine Car Wheels 14" X 3½"	1300#		
1	Mine Car Wheel	72#		
	Car Wheel Caps for Self Oilers	240#		
		2055#	2.75	56.51
	Brass Rotating Nuts	30#	.27	8.10
	(At Hard Ore for Crusher)			
2	(12" X 40" Beams 17'L.			
	(1360# @ 2.90 + frt.3.92)		43.36	43.36
	(1 Roll 274#			6.58
1	(38 Tooth Cast Pinion 4"			
	(Pitch X 13" Face & 10"			
	(bore, shrouded both sides			
	(256.00 + Frt. 12.60			268.60
1	Iron Gear Wheel, Rim in Segments 732.50 + 40.56 Frt.			773.06
2	Cylinder Heads(Hodge Det.)			79.55
1	Commutator for Dynamo			35.00
1	8' Bycicle Sheave			65.00
1	7' Common Sheave			35.00
	186' Split Pipe Covering & Frt.		.22	44.52
56	Pieces Basswood Lagging			1415.28
			Total	1415.28
	Amount For'd			2341.58

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Cliffs Shaft Mine.

MACHINERY SUPPLIES(CONTINUED).

		Amount For'd		2341.58
9' - 1"	Pipe Covering	.23	2.07	
24' - 2"	" "	.27	6.48	
21' - 2½"	" "	.31	6.51	
144' - 3"	" "	.36	51.84	
3' - 4"	" "	.44	1.32	
18' - 5"	" "	.50	9.00	
3' - 6"	" "	.58	1.74	
			78.96	
	Less 60 & 10%		50.54	28.42
9	- Comp. Compressor Rings - Old			
4	Shafting Sleeves	"		
1	8½" Solid Sheave	"		
1	10" Solid Sheave	"		
1	11" Solid Sheave	"		
1	22" Spoke Sheave	"		
1	18" Spoke Sheave	"		
1	2½ X 2¼ Pump Rod Axle	"		
1	14" Driving Belt Pulley	"		
2	Brass Comp. Linings	"		
2	Bellows	"		
1	Expansion Joint	"		28.42
		Total	28.42	
		Amount For'd		2370.00

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Cliffs Shaft Mine.

MACHINERY SUPPLIES(CONTINUED).

		Amount For'd			2370.00
125#	1/16"	Rainbow Packing			
192#	1/8"	" "			
317#			.45	142.65	
190#	1/6"	Sheet Rubber "	.15	28.50	
140#		Italian Hemp "	.12	16.80	
15#	¼"	Hard Rubber Packing			
5#	3/8"	" " "			
115"	½"	" " "			
92#	5/8"	" " "			
110#	3/4"	" " "			
30#	7/8"	" " "			
5#	1"	" " "			
372#			.45	167.40	
5¼ #	½"	Eureka " "			
32#	3/4"	" " "			
33#	1"	" " "			
23#	1¼"	" " "			
93¼#			.40	37.30	
200#		Empire " "	.21	42.00	
25 3/4	3/4"	Sq. Flax "			
6#	1"	" " "			
10#	7/8"	Rd. " "			
41 3/4#			.45	18.81	
3#	5/8"	German Asbestos"			
7#	3/4"	" " "			
10#			.85	8.50	461.96
			Total	461.96	
		Amount For'd			2831.96

MACHINERY SUPPLIES(CONTINUED).

		Amount For'd		2831.96
10#	Metal Piston Packing	.75	7.50	
14 1/4#	1" Red Seal "	.23	3.28	
3#	Eclipse Gasket "	.75	2.25	
22#	Garlock "	.75	16.50	
10½#	Asbestos Wicking	.22	2.31	
3#	Lub. Graphite	.20	.60	
15#	Rub. Cyl. Buffers			
16½#	Rub. Cage Buffers			
31½#		.80	25.20	
16#	Condenser Valves, Rubber	1.50	24.00	
40#	Pump Valves, Rubber	.75	30.00	
90#	Vulcanized Fibre	.50	45.00	
19	Spool Pins	.75	14.25	
3	12" Springs	1.50	4.50	
3	18" "	3.25	9.75	
9	8" "	.75	6.75	
2	9" Car Springs	1.75	3.50	
1	12" Emery Wheel		2.00	
111	Holmes Fire Bricks	40.00	4.44	
1	Barrel Fire Clay		1.90	
5	Gals. Belt Oil	1.25	6.25	
1#	Belt Cement		.50	
31	Gals. Raw Linseed Oil	.72	22.32	
18#	Welding Compound	.12½	2.25	
2	Flue Cleaners	1.00	2.00	237.05
		Total	237.05	

Amount For'd 3069.01

MACHINERY SUPPLIES(CONTINUED).

		Amount For'd		3069.01
1	Gear Wheel for Sample Crushed		1.40	
2	18" Spoke Sheaves	2.50	5.00	
5	15" Spoke Sheaves	3.00	15.00	
2	15" Solid Sheaves	3.00	6.00	
1	36" Spoke Sheave, Foster		4.00	
1	22" Wooden "		1.00	
1	3" Boiler Flue 14'ft		1.68	
1	4" Boiler Flue 7'		.84	
1	7" Brass Steam Guage, Fitch			
1	6" " " "			
1	5" " " "			
1	2" Inspirator		2.50	
7#	Brass Tubing	.25	1.75	
1	Compressor Cap Block		10.00	
1	Indicator Chain		5.85	
3	Lugs for Drums			
5	Lengths Volunteer Air Hose	2.50	12.50	
2	Rubber Buffers	.65	1.30	
7	Feed Screws	3.00	21.00	
13	Piston Packing Ring Springs	.16	2.08	
7	Hook Bolts, Regular	2.80	19.60	
4	Buffer Yokes	.60	2.40	
14	Hook Bolts, Adjustable	2.60	36.40	
12	Hook Bolts, Rough	1.50	18.00	
24	Centre Tripod Bolts	.50	12.00	
19	Rotating Bars, 2nd - Hand			
7	Rotating Nuts	2.40	16.80	
10	Rotating Nuts, Old			197.10
		Total	197.10	
		Amount For'd		3266.11

MACHINERY SUPPLIES(CONTINUED).

		Amount For'd		3266.11
43	Chuck Bolts	.60	25.80	
10	Jam Nuts	.40	4.00	
10	Feed Nuts, Old			
6	Feed Nuts, Old			
4	Rockers	5.20	20.80	
19	Rockers, Old			
5	Rocker Pins	.30	1.50	
5	Side Rods	.30	1.50	
8	Standards	1.25	10.00	
6	Ratchets, Old			
1	Ratchet Box		4.75	
17	Leather Packings	.40	6.80	
48	Sets Screws	.15	7.20	
9	Chuck Keys	.50	3.60	
10	Steel Piston Forgings	5.00	50.00	
20	R.D. Chucks, Repaired	3.50	70.00	
3	R.D Chucks, New #3	12.00	36.00	
1	R.D. Chuck, New 40#	.12½	5.00	
1	New 3¼ Piston		12.00	
1	Taper Throttle Valve		.80	
1#	Pawl Spring Steel		.50	
6	Steam Chest Studs	.10	.60	
6	Pawls Complete	1.25	7.50	
3	Leg Flanges	2.40	7.20	
3	Leg Sleeves	.75	2.25	
25	R.D. Shells 1425#, Old			
21	Slide Valves			
12#	Leg Sleeves, Rough	.25	3.00	
20	Rear Tripod Legs Compressor	3.75	75.00	
25	Extension Legs	.50	12.50	368.30
		Total	368.30	

Cliffs Shaft Mine.

MACHINERY SUPPLIES(CONTINUED).

		Amount For'd			3634.41
		Crusher Castings.			
11	Toggles for Hodge Iron	2915#			
6	Toggles for Holly Iron	1870			
		4785#	.03	143.55	
1	Tail Black Hodge Iron	400	2.40	9.60	
10	Side Plates Holly "	1480	2.40	35.52	
6	Side Plates Hodge "	646	2.40	15.50	
2	Face Plates Holley "			146.06	
1	Jaw Plate " "	2187	.04	87.48	
1	Jaw Plate Hodge "	1894	.04	75.76	
1	Face Plate Hodge "	2307 Invoice		73.11	
8	Toggle Bearings	2185 Price .06		131.10	
14	Toggle Strips	1815	3.93	71.33	
		Manganese Steel.			
	Hodge & Holley.				
14	Side Plates	2822#	.104	293.49	
1	Face Plate	1742	.104	181.17	
1	Jaw Plate)				
	) Gratis	Frt.	22.98	22.98	1286.65
1	Jaw Plate)				
			Total	1286.65	

Total Machinery Supplies 4921.06

Cliffs Shaft Mine.

B U I L D I N G M A T E R I A L .

5	Pcs. 30'to Sq. 12 X 12 Pump Rods	5.00	25.00
2	Rolls Building Paper	.75	1.50
33	Panes 9 X 15 Glass	.09	2.97
4	Panes 12 X 16 Glass	.12	.48
5	Only, Padlocks	.45	2.25
5	Bdls. Shingles	.75	3.75
25	Cedar Posts	.10	2.50
3	Telegraph Poles	.35	1.05
5	Sheets Corrugated Iron Roofing		3.90
3	Old Panel Doors	1.00	3.00
½	Bushel Hair		
1½	Barrels Cement	1.20	1.80
	Wire Fencing from L.S. & I.		3.48
1	Barrel, 56½ Gals. Roofing Paint	.55	31.08
174 '	Ladders	.07	12.18
330'	Ladder Sides		6.30
1	Piece Oak 8" X 12" X 13' 104		
1	Piece Oak '" X 12" X 18' 144		
	248	33.50	8.31
1	Piece Fir Timber 12 X 18 X 24 = 432	23.50	10.15
1590'	2" Hemlock	11.50	18.28
24317'	3" "	11.25	273.57
23062'	3" "	11.25	259.45
7434'	2" "	9.00	66.91
4500'	1" "	12.50	56.25
55	Pcs. 2 X 8 X 16' Pine 990		
72	Pcs. 2 X 6 X 16' " 1142		
	2132	13.00	27.72
875'	6" Shiplap	16.00	14.00
		Total	835.88

Amount For'd 835.88

Cliffs Shaft Mine.

BUILDING MATERIAL(CONTINUED).

		Amount For'd			835.88
10	Pcs. 6 X 8 X 14 Pine	560			
2	" 6 X 8 X 18 "	144			
6	" 6 X 6 X 18 "	324			
		1028	19.00	19.53	
3	" 12 X 12 X 12 "	432	16.75	7.23	
6	" 10 X 12 X 18 "	1080	17.75	19.18	
6	" 10 X 12 X 20 "	1200	18.75	22.50	
13	" 5 X 5 X 14 Cull Maple	390			
4	" 1¼ X 9 X 14 "	" 52			
		442	13.63	6.02	
	Lot of Oak Car Stuff, Hard Ore			37.91	
5	Pcs. 6 X 10 X 16 Oak	390			
72	" 4 X 12 X 12 "	3456			
3	" 2 X 12 X 16 "	96			
2	" 2 X 8 X 14 "	36			
10	" 2 X 8 X 10 "	160			
7	" 2 X 8 X 10 "	91			
	1¼ X 12	85			
		4314	33.50	144.52	
1219'	2" Cull Hemlock & Pine		5.00	6.09	268.98
			Total	268.98	

Total Building Material 1098.86

Cliffs Shaft Mine.

E X P L O S I V E S .

15 Boxes 750# - 50% Giant	.12	90.00	
100 Caps		.50	
2500' Fuse	3.80	9.50	
6# Battery Wire	.28½	1.71	
Total Explosives		101.71	101.71

M I N E T I M B E R .

36 Pcs. 32' Long 10" Top 1152 Lineal	7, 80.64		
Freight on Above	47.34	127.98	
64 Pcs. 9 X 12 X 12 Pine 6912			
45 " 9 X 12 X 16 " 6480			
6 " 12 X 12 X 16 " 1152			
14544'	17.00	247.24	
2520'Lagging	.01	25.20	
2 Pcs. Stulls 33' to Sq. 12X12		8.25	
4 " " 16' Long 12" Dia.	64		
1 " " 16' Long 13" Dia.	16		
2 " " 16' Long 14" Dia.	32		
112 @ .04½		5.04	
1 " " 16' Long 15" Dia. 16 @ .06½		1.04	
7443'Ties	.02 3/4	204.68	619.43
Total Mine Timber			619.43

Cliffs Shaft Mine.

F U E L .

3811 Tons Steam Coal	3.025	11526.02
Total Fuel		11526.02

B A R N .

738# Horse Shoes	.04¼	31.36
2# Horse Shoe Nails	.18	.36
1 Hand Sleigh for Drills		.25
25 Wheel Fellows	.22	5.50
80# Skeins	.03	2.40
1 Rim		.25
65 Wagon Spokes	.06	3.90
3 Wagon Hubs	.70	2.10
		46.12
Total Barn Acct.		46.12

Cliffs Shaft Mine.

ANTIQUATED MATERIAL.

General Supplies.

1	Hydraulic Jack		45.00	
40	Prs. B.S. Tongs		30.00	
34	Anvil Tools		8.50	
12	Sand Pumps	.25	3.00	
7	Scrapers	.15	1.05	
1	Old Vise		7.00	94.55

IRON & STEEL.

1440#	Old Bolt Ends	.01	14.40	
2	Bars 1½ X 1 3/4 Iron	272		
2	Bdls. 3/8" Half Rd. Iron	215		
2	Bars 2 X 3 Iron	645		
4	Bars 2 X 4 Iron	1675		
1	Bar 3/4 X 2 "	30		
		2837 .01	28.37	42.77

MACHINERY SUPPLIES.

11'	3" Galv. Spiral Pipe, Old		1.73
34'	3" Galv. Spiral Pipe, Old		10.66
31'	4" Black Pipe, Old		8.97
59'	5" Black Pipe, Old		19.24
19'	6" Black Pipe, Old		8.06
13'	3½" Nipples	.62½	8.13
10'	3½" Unions	.75	7.50
18'	3½" Fl. Unions		
6'	3½" Elbows		
4'	3½" Couplings		64.29

Total Antiquated 201.61

Cliffs Shaft Mine.

S C R A P .

(Cast Scrap)	1040#	7.00	3.25
( ) (2240#)			
(Cast Scrap)	8000#	7.00	25.00
	9040#		28.25
Wrought Scrap	3620#	5.00	8.05
Scrap Brass Spring Wire	285#	.08	22.80
Scrap Brass Boxes & Valves	719#	.10	71.90
Total Scrap			131.03

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M I N E E Q U I P M E N T .

DIAMOND DRILLS.

1 - 1½" Core Barrel, 8' Long		5.90	
1 - 1 5/8" " " , " "		5.90	
7½'- 2" Casing Pipe		.89	
9 - 1 3/4" Blank Bits		2.67	
1 Safety Clamp "Cleveland"		6.24	
1 - 12" Sheave		1.18	
2 - 4" Sheaves		.59	
2 - 6" Sheaves		.70	
1 - #1 Cameron Pump in Mine		29.52	
1 - #2 Cameron Pump in Mine		29.52	
1 - #4 Vise - B.S. Office		2.63	
1 - Hoisting Clamp		.14	
11 - Core Lifters		24.06	
	Total	109.94	
	Less 90%(Same as 1899)	98.95	10.99
		Total Diamond Drills	10.99

RECORD.

2 - #4 3/4" Diamond Drills

1 - Small Diamond Drill

1 - Locomotive Boiler on Wheels - Pioneer

296'- 1 5/8" Drill Rods "Cleveland"

335'- 1 15/16" " " 165' - 1 5/8" Drill Rods "cleveland"

3½'- 2" Casing Pipe

5 - 1 3/4" Blank Bits

4 - 1 15/16" Core Barrels
2 - " Lifters
3 - " " Couplings
10 - " "
12 - " Springs

1 - Feed Screw

4 - Gear Wheels

1 - Diamond Drill, Frame Wheels & Axes - Scrap

Cliffs Shaft Mine.

MINE EQUIPMENT (CONTINUED).

POWER DRILLS.

10 - #3¼ Rand Drills and Tripods, New I898=$320.00		
Less 20% Add Frt. 6.34 = $262.34	2623.40	
6 - #3¼ Rand Drills and Tripods New, 1899 from Hard		
Ore in Exchange for 6 New, 1898 #3 Drills.		
Premium for Exchange - $79.62 - 1898, Price		
$243.58 + $13.27 = $256.85	1541.10	
15 - #3¼ Rand Drills and Tripods New, Oct. 1899		
From Factory $3375.00 + Freight $96.12	3471.12	
1 - #3 Rand Drill Built in Cliffs Shaft Shops in 1899	114.08	
Total	7749.70	
Less 40% - 1900	3099.88	4649.82
Less 30% - 1899		
14 - Old ##3 Rand Drills & Tripods		
@ $10.00 Each Net - 1900		
@ $25.00 " " - 1899		140.00
1 - Bullock Drill and Tripod		
1 - Bullock Drill - Monarch		
1 - #13 Rand Slugger No Shell or Tripod		
Total Power Drills		4789.82

Cliffs Shaft Mine.

MINE EQUIPMENT(CONTINUED).

CARS, SKIPS and DERRICKS.

40 - 2¼ Tons Wood Frame Cars in Mine	944.80	
1 - 1½ Ton Wood Frame Car - Coal	2.95	
3 - Plat Form Cages	177.15	
2 - 3/4 Ton Buckets	10.63	
3 - ½ Ton Buckets - Mine	10.63	
1 - 1 Ton Bucket	17.71	
1 - 2 Ton Skip - Old Barnum - Scrap		
6 - Wooden Tram Cars	70.86	
1 - ½ Ton Tram Car - Mine	11.81	
1 - Small Derrick with Sheaves & Guys - Foster	11.81	
1 - 10" Sheave	.66	
10 - Rollers	.66	
2 - Timber Dolleys	2.63	
1 - 8" Sheave	.50	
2 - ½ Ton Buckets - In Yard	4.72	
2 - Small Buckets - In Yard	4.13	
1 - 1 Ton Iron Tram Car - In Mine		
Total	1271.65	
Less 90% - 1900 (Same as 1899)	1144.49	127.16

CARS BUILT IN 1898.

4 - Tram Cars Crusher - 1 at Cleveland	788.92	
2 - Iron Tram Cars - In Mine	116.80	
1 - Transfer Car - In Mine	51.85	
1 - Set of Dumping Cars - Bot. from Foster	55.80	
4 - Underground Tram Cars	77.67	
Total	1091.04	
Less 70% - 1900	763.73	327.31

CARS BUILT IN 1899.

2 - Side Dump Iron Tram Cars Charged Underground Tracks & Cars		

Total Cars, Skips & Derricks 454.47

Cliffs Shaft Mine.

MINE EQUIPMENT(CONTINUED).

PORTABLE MACHINERY.

2 - #5 Knowles Pumps - M. Mine	177.15	
1 - #8 Knowles Pump - Salisbury	162.39	
1 - #8 Knowles Pump - H.O. Shop	162.39	
1 - #10Knowles Pump - Moro Mine	236.20	
1 - #6 Knowles Pump - Salisbury	88.57	
1 - #5 Knowles Pump - H.O. Mine	73.82	
1 - Special #5 Cameron Pump #4212 - Yard	164.02	
1 - Duplex Worthington 14 X 16 X 16 - B. Shaft	236.20	
1 - " " 4 X 4½ X 4 - Salisbury	29.52	
1 - Winze Hoist - Lake	88.58	
1 - Iron Water Boiler	50.00	
1 - 16 X 24 Hodge Engine, Cost for Repairs H.Ore Shop 1896	91.13	
1 - #5 Cameron Pump - Salisbury	165.00	
1 -6 X 4 X 6 Duplex Worthington - Michigamme	115.00	
Total	1839.97	
Less 90% - 1900(Same as 1899)	1655.97	184.00
1 - Lidgerwood Hoist #34 Double Cylinder 6¼ X 8 Friction Drum with Foot Brakes $443.25 Frt. $14.50	457.75	
Less 20% - 1900	91.55	366.20
Total Portable Machinery		550.20

1
45

Cliffs Shaft Mine.

MINE EQUIPMENT(CONTINUED).

BARN ACCT.

Horses.

1 - Black Horse 1430# - At Lake	150.00	
1 - Bay Horse 1440# - At Lake	150.00	
1 - Bay Horse - Mack (½ Cost) Agent's	125.00	
1 - Bay Horse - Don (½ Cost) "	125.00	
1 - Brown Mare- Maud (½ Cost) Engineer's	80.00	
1 - Bay Colt - Belongs to Cliffs Shaft Mine		
Total	630.00	
Less 55% (Same as 1899)	346.50	283.50

CARTS, WAGONS and SLEIGHS.

1 - Double Sleigh - From Foster	1.35	
1 - Wagon Box " "	7.39	
1 - Double Wagon " "	14.76	
1 - Double Wagon, Light - Agent's	84.58	
1 - Double Wagon, Heavy - Mine	24.30	
1 - Double Truck, Heavy - Mine	14.77	
1 - Dump Wagon - Mine	5.90	
1 - Buck Board	5.90	
1 - Dump Sleigh	5.90	
2 - Wood Racks N.G.	1.77	
1 - Wagon Jack	.60	
Proportion of Agent's Cutter	19.49	
1 - Neck Yoke	.88	
1 - 2 Seat Si ngle Sleigh - Engineer's	20.00	
Total	207.59	
Less 90% - 1900(Same as 1899)	186.83	20.76

176 Amount Carried For'd 304.26

Cliffs Shaft Mine.

	Amount For'd		304.26

CARTS, WAGONS and SLEIGHS(CONTINUED).

1 - Single Wagon - For Drills		25.00	
1 - Wagon Box - For Mine Wagon		9.00	
3 - Cushions - For Agent		12.00	
	One Half Interest in Following:		
1 - Set Double Harness	Agent	30.00	
2 - Blankets	"	4.00	
2 - Surcingles	"	1.00	
1 - Double Sleigh	"	90.87	
1 - Single Buggy	"	77.02	
1 - Double 3 Seat Sleigh	"	49.35	
Top Prop. Ext. Double Carriage	"	167.87	
	Total	466.11	
Less 50%(Same as 1899)		233.05	233.06

R E C O R D .

1 - Single Sleigh for Drills, Bot. from J.T. Burke $18.00 (1899)

1 - Double Sleigh - Mine

1 - Double Sleigh - From Foster

1 - Set Whiffle Trees - Mine

1 - Double Harness - Mine

2 - Storm Covers - Mine

Total Barn Acct.	537.32

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IRON CLIFFS CO.

Recapitulation of Cliffs Shaft Inventory,

November 30th, 1900.

		Supplies Proper	Supplies Antiquated	Total Amount.
General Supplies		14437.86	94.55	14532.41
Iron & Steel		1772.16	42.77	1814.93
Oil, Grease & Candles		616.62		616.62
Machinery Supplies		4921.06	64.29	4985.35
Building Material		1098.86		1098.86
Explosives		101.71		101.71
Mine Timber		619.43		619.43
Fuel		11526.02		11526.02
Barn		46.12		46.12
Total		35139.84	201.61	35341.45
Scrap				131.03
MINE EQUIPMENT.		Valuation	Deduction	Net Amt.
Diamond Drills	- 90%	109.94	98.95	10.99
Power Drills	- 40%	7749.70	3099.88	4789.82
	- Net	140.00		
Cars, Skips & Derricks	- 90%	1271.65	1144.49	
	- 70%	1091.04	763.73	454.47
Portable Machinery	- 90%	1839.97	1655.97	
	- 20%	457.75	91.55	550.20
Barn	- 55%	630.00	346.50	
	- 90%	207.59	186.83	
	- 50%	466.11	233.05	537.32
Total		13963.75	7620.95	6342.80
				1233.90
				7576.70
		GRAND TOTAL		41815.28

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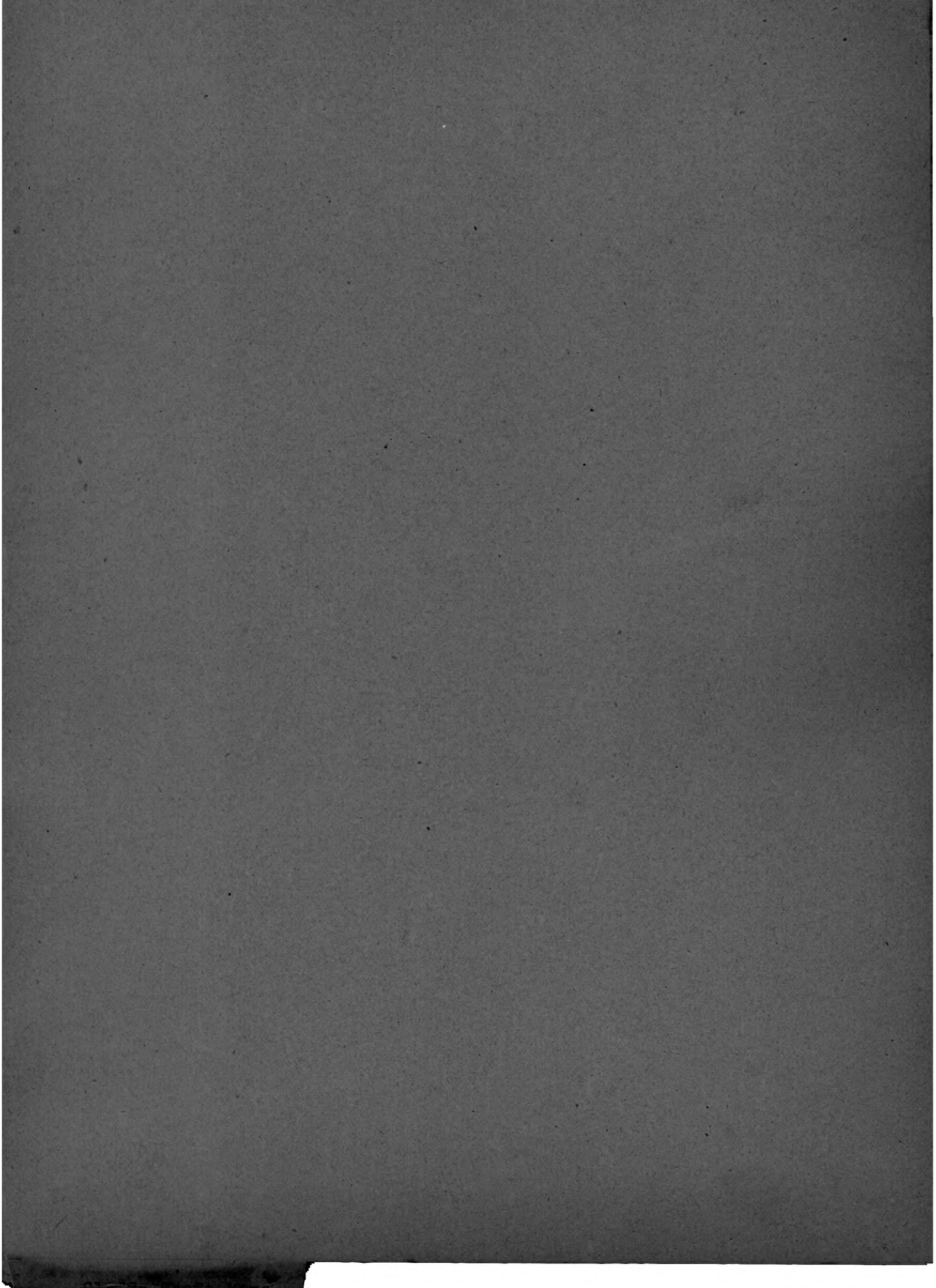


I R O N C L I F F S C O .

Salisbury Mine Inventory, November 30th, 1900.

-----oOo-----

BUILDINGS.

1 Engine & Boiler House, Frame, Iron Covered - New

1 Frame Blacksmith and Carpenter Shop (Temporary)

1 Shaft House, Pocket and Trestle - New

1 Frame Office Building - New

1 Dry House

1 Oil House

1 Ice House

1 Powder House

1 Coal Shed, Pocket & Trestle - 1800 Tons Capacity

1 Dwelling House (Capt. Thomas Buzzo)

1 " " " (Shift Boss)

1 " " " (Clerk)

12 " " " (Frame)

2 " " " (Double)

3 " " " (Single)

1 " " " (Double, Old Office Bldg.)

1 " " " (Double Log)

7 " " " (Single Log)

1 Barn

1 Engine House over engine for coal dock

RECORD.

1 Frame Blacksmith and Carpenter Shop, destroyed by fire Feby. 8th/1900

Capacity of Coal Dock Increased from 1200 to 1800 tons during year.

Salisbury Mine.

P L A N T .

Engine House.

2 18 X 48 Engines - Lane

1 18 X 60 " - Reynolds

2 10 ft. Drums

1 18 X 30 Rand Compressor (Left Side)

1 Heater

2 18 X 84 Boilers - Reynolds	Upright
1 6 X 14 Boiler	Tubular
1 No. 4 Feed Pump	Boiler House
1 Air Receiver	
1 6 X 14 Boiler	Tubular(Condemned)
1 Condensor	Not in Use.

2 Extra Arms for Lane's Drums

1 Set of Electric Bells, Bottom of Mine to Engine House

1 16 X 30 Hodge for Hoisting Coal at Coal Dock

1 4 ft. Drum " " " " " "

1 14 X 24 Engine - Merritts in Yard

2400' Wire Rope on Skip

1600' " " " Cage

500' Rubber Hose & Nozzle(Fire Equipment)

PUMP.

2 Bob Rods, Filling & Connections - New

1 12" Draw Lift

1 12" Plunger

4 14" Plungers

2 12" Buckets

2 8" Buckets

500' Ru

TEMPORARY ENGINE HOUSE.

1 Boiler - Belongs to Cliffs Shaft

SURFACE DRAINAGE EQUIPMENT.

1 Pump - Belongs to Cleveland

1 Portable Boiler - Belongs to Cleveland

Salisbury Mine.

GENERAL SUPPLIES.

10# Babbitt	.40		4.00
2 Brushes	.30		.60
10 Brooms	.30		3.00
5 Burners #2 Common	.10		.50
4# Borax	.12½		.50
9 Tons Blosburg Coal	2.40		21.60
140# Chain	.04		5.60
6# Copper Bar	.30		1.80
2 Chimneys #2	.10		.20
6 Chimneys #2 Rochester	1.25	Doz.	.63
4 Chimneys #3 Rochester	3.00	Doz.	1.00
8 Globes for Lanterns	.10		.80
25# White Lead	.07		1.75
3 Lamps for Miners	1.00	Doz.	.25
100 Ladder Rounds	.02		2.00
10 Lamps 16 C.P.	.25		2.50
2 Lamps 50 C.P.	.75		1.50
9 One Quart Oilers	3.00	Doz.	2.25
2200' Wire Rope 1 1/8 Net	.22¼		489.06
308' Wire Rope	.11		33.88
16 Bbls. Salt	1.10		17.60
1 Torch	8.00	Doz.	.67
10# Waste, Colored	.05		.50
4# Wicking	.18		.72
3 Doz. Wicks	.05		.15
6# Wire Spring	.22		1.32
General Supplies For'd			594.38

Salisbury Mine.

General Supplies(Continued)

	Amount For'd		594.38
3 Axes	@ 8.00 Doz.	2.00	
6 4" Files	.70 Doz.	.35	
6 6" Files	.90 Doz.	.45	
10 8" Files	1.29 Doz.	1.07	
3 10" Files Round	1.30	.32	
1 14" File ½ Round		.25	
2 16 Files	.35	.70	
2 Hammers	12.00 Doz.	2.00	
12 Handles, Axe		1.25	
1 " , Adze		.25	
4 " , Cant Hook	1.75	.59	
7 " , Hammer	1.25	.73	
6 " , Pick	1.10	.55	
30 " , Pat'd Pick	1.35	3.38	
20 " , Sledge	1.25	2.09	
3 Saws	10.00 Doz.	2.50	
2 Shovels, Coal	10.50 Doz.	1.75	
12 Shovels Ajax		8.50	
1 Monkey Wrench	12.00 Doz.	1.00	
35# Wheel Barrow Wheels	2.40	.84	30.57
Total General Supplies			624.95

	Amount For'd		624.95

I R O N & S T E E L .

3546# Bar Iron	.025	88.65	
142# Lomore Iron	.07 3/4	11.00	
83# Swede Iron	.037	3.07	
2475# Steel Plate	.02	49.50	
265# Steel 2½ Round	1.85	4.90	
38 Steel 1½ Round	.05	1.90	
35# Steel 1" Soft Round	.05	1.75	
42# Steel Chisle	.055	2.3I	
15 Steel Tool	.055	.82	
22 Steel Spring	.055	1.21	
376 Steel Drill	.07	26.32	
90# Steel, Shoe	2.25	2.02	
100# Steel, Plate	.02	2.00	
1000# T. Rail 30#(2240 Ton)	21.25	9.49	
500 R.R. Spikes 7/16 " - 3½ 4½	5.85	14.62	
46# 4d Nails	3.60	1.66	
20# 8d Nails	3.50	.70	
84# 10d Nails	3.40	2.86	
50# 20d Nails	3.30	1.65	
62# 40d Nails	3.20	1.98	
100# 50d Nails	3.10	3.10	
200# 60d Nails	3.00	6.00	
600 C. Bolts	.70	4.20	
112# Nuts	.06	6.72	
96# Rivets	.05	4.80	
38# Washers	.04	1.52	
Total Iron & Steel			254.75
	Amount For'd		879.70

Salisbury Mine.

	Amount For'd		879.70

OIL, GREASE and CANDLES.

85 Gals. Black Oil	.12½	10.63	
81.70 " Cylinder Oil	.26	21.24	
21½ " Red Oil	.14	3.01	
5 " Kerosene "	.12	.60	
284 Candles	.09	25.56	
33 Art. Grease	.08	2.64	
44# Grease	.03	1.32	
227 Axle Grease	.02	4.54	
15# Tallow	.06	.90	
	Total Oil, Grease & Candles		70.44
	Amount For'd		950.14

		Amount For'd		950.14

MACHINERY SUPPLIES.

29' 8" Pipe	@ 2.75	79.75		
34' 10" Pipe	4.15	141.10		
		220.85		
Less 10 - 70 & 10%		167.18	53.67	
	Malleable			
6 3/8" Bushings	.04	.24		
12 ½" "	.04	.48		
10 3/4" "	.05	.50		
18 1" "	.06	1.08		
12 1¼" "	.07	.84		
4 1½"	.09	.36		
6 2" "	.14	.84		
2 2½" "	.21	.42		
1 3" "	.30	.30		
		5.06		
Less 75 - 10 & 5%		3.98	1.08	
11 ¼" Couplings	.05	.55		
7 ½" "	.07	.49		
16 3/4" "	.10	1.60		
18 1" "	.13	2.34		
16 1¼" "	.17	2.72		
10 1½" "	.21	2.10		
2 2" "	.28	.56		
5 2½" "	.40	2.00		
4 3" "	.60	2.40		
4 3½" "	.80	3.20		
6 4" "	1.00	6.00		
2 8" "	4.25	8.50		
	Total	32.46	9.25	
Less 75 & 5%		23.21		
4 1" Crosses	.27	1.08		
Less 75 & 5%		.83	.25	
		Amount For'd	64.25	950.14

			Amount For'd	64.25	950.14

MACHINERY SUPPLIES (CONTINUED).

8	¼" Elbows	@ .05	.40		
5	3/8" "	.05	.25		
6	½" "	.06	.36		
7	3/4" "	.08	.56		
18	1" "	.10½	1.89		
8	1¼" "	.16	1.28		
2	1½" "	.20	.40		
6	2" "	.28	1.68		
2	2½" "	.50	1.00		
2	3" "	.75	1.50		
1	3½" "	1.05	1.05		
3	4" "	1.20	3.60		
1	6" "	2.75	2.75		
			16.72		
	Less 75 & 5%		12.75	3.97	
5	1" Flanges	.52	2.60		
1	2" "	1.00	1.00		
6	2¼" "	1.25	7.50		
1	3" "	1.50	1.50		
4	3½" "	1.80	7.20		
			19.80		
	Less 75 - 10%		15.35	4.45	
			Amounts For'd	72.67	950.14

		Amount For'd	72.67	950.14

MACHINERY SUPPLIES(CONTINUED).

4 3/8"	Nipples @	.03	.12	
4 ½"	"	.04	.16	
10 3/4"	"	.05	.50	
4 1"	"	.06	.24	
12 1¼"	"	.09	1.08	
4 1½"	"	.10	.40	
7 2"	"	.13	.91	
3 2½"	"	.28	.84	
2 5"	"	1.05	2.10	
			6.35	
	Less 80%		5.08	1.27
4 ¼"	Plugs	.02	.08	
8 ½"	"	.02	.16	
6 3/4"	"	.03	.18	
10 1"	"	.04	.40	
2 1¼"	"	.05	.10	
6 1½"	"	.07	.42	
4 2"	"	.10	.40	
1 3¼"	"	.18	.18	
	Less 75 - 10 & 5%		1.92	
			1.51	.41
			72.67	950.14

Amounts For'd

		Amounts For'd	74.35	950.14

MACHINERY SUPPLIES(CONTINUED).

3 ½" Tees	@	.08	.24	
11 ½" "		.09	.99	
18 3/4" "		.12	2.16	
8 1" "		.15	1.20	
3 1¼" "		.23	.69	
9 1½" "		.29	2.61	
6 2" "		.41	2.46	
6 2½" "		.73	4.38	
1 6" "		4.00	4.00	
1 10 " "		19.50	19.50	
			38.23	
	Less 75 & 5%		29.15	9.08
8 3/8" Unions		.20	1.60	
6 ½" "		.22	1.32	
12 3/4" "		.27	3.24	
10 1" "		.33	3.30	
10 1 3/4" "		.46	4.60	
3 1½" "		.58	1.74	
4 2" "		.75	3.00	
1 2½" "		1.55	1.55	
2 3" "		2.10	4.20	
1 3½" "		3.65	3.65	
			28.20	
	Less 80%		22.56	5.64
		Amounts For'd	89.07	950.14

	Amounts For'd	89.07	950.14

MACHINERY SUPPLIES(CONTINUED).

3 ¼" Globe Valves	.72	2.16	
6 3/4" " "	1.26	7.56	
2 1" " "	1.80	3.60	
9 1¼" " "	2.52	22.68	
6 1½" " "	3.50	21.00	
1 2" " "	5.30	5.30	
		62.30	
Less 70%		43.61	18.69
1 2" Gate Valve	6.20	6.20	
Less 70 & 10%		4.53	1.67
	Amounts For'd	109.43	950.14

	Amounts For'd		109.43	950.14

MACHINERY SUPPLIES(CONTINUED).

184# Cage Brackets	2.40		4.42	
6 Boiler Glasses 22 X 5/8	2.00 Doz.		1.00	
180 Brake Blocks	.25		45.00	
1320# Bar Grate	2.70		35.64	
44# Brasses for Cars	.30		13.20	
1 Brass Box 30#	.30		9.00	
1 Clamp 3¼ Rand Drill			7.50	
480# Castings for Machy	2.40		11.52	
1570 Car Wheels	2.50		39.25	
668 Car Wheels	.03		20.04	
310# Castings for Machine Bars	2.40		7.44	
2 Clamps for Hose	.20		.40	
2 Couplings	.20		.40	
60# Door Liners for Boilers	.03		1.80	
274# Fiber	.50		137.00	
9 Glasses for Oil Cups	.07½		.68	
25# Sole Leather	.29		7.25	
2 Brasses for Compressor			15.10	
12 Sheaves 660#	.02½		16.50	
7 Pump Springs	.25		1.75	
10# Graphite	.20		2.00	
150# Coach Screws	2.80		4.20	
15# Packing(Asbestos)	.40		6.00	
11# " (Eureka)	.40		4.40	
22# " (Empire)	.25		5.50	
50# " (Hemp)	.12		6.00	
10# " (Rainbow)	.50		5.00	
1# " (Rand Drill)			.50	
10# " (Square)	.45		4.50	
6# Sheet Rubber	.15		.90	
			413.89	523.32
	Amount For'd			1473.46

Total Machinery Supplies 523.32

Salisbury Mine.

Amount For'd 1473.46

B U I L D I N G M A T E R I A L .

10 9 X 13 Glass	.06½	.65	
8 9 X 14 "	.07¼	.58	
2 Door Locks & Knobs	.25	.50	
400' 1" Common Lumber	15.00	6.00	
2148' 2" Com. Lumber	15.00	32.22	
4352' 3" Com. Plank	10.00	43.52	
450' 1" Maple Plank	25.00	11.25	
64' 2" Maple Plank	25.00	1.60	
168 3" Maple Plank	25.00	4.20	
747 8 X 8 " Plank	25.00	18.68	
3650' 3¼ Face Maple Flooring 7/8	20.50	74.82	
22200' Shaft Timber	19.93	442.50	
300# Mineral Paint	1.50	4.50	
15 Gals. Linseed Oil	.82	12.30	
3 Pkgs. Screws	.40	1.20	654.52
Total Building Material 654.52			2127.98

Amount For'd 2127.98

Salisbury Mine.

		Amount For'd		2127.98

EXPLOSIVES.

4# Battery Wire	.28½	1.14		
5# Battery Wire	.24	1.20		
1600 Caps	5.00	8.00		
500 Exploders	30.15	15.08		
5400' Fuse	3.80	20.52		
1000# Explosives	.12	120.00	Total Explosives.	165.94
		Total		2293.92

Amount For'd		2293.92

Salisbury Mine.

Amount For'd		2293.92

M I N E T I M B E R .

200 Cords 5' Lagging	3.25	650.00
38075' 7' Lagging	.60	228.45
63124' Poles	.90	568.11
4006' Stull Timber 6 to 8-16	.02	80.12
49208' " " 8 " 10-16	.03	1476.24
9097' " " 10-12-16	.04 3/4	432.11
2560' " " 12-14-16	.06½	166.40
5884' " " 14-16-16	.09	529.56
140' Trestle Timber	.12½	17.50
50' " "	.05	2.50
200' 5 Pcs. 40' for Pump Rods	.25	50.00
Total Mine Timber		4200.99

F U E L .

930# 1710 Tons Soft Coal	@ 3.1414	5373.11
Total *Forward*		11868.02

Salisbury Mine.

	Amount For'd		11868.02

B A R N .

12 Tons Hay	13.50	162.00	
207 Bushels Oats	.30	62.10	
46# Horse Shoes	.05	2.30	
5# Horse Shoe Nails	.18	.90	
3700# Straw	7.25	13.41	
46# Bran	17.50	.40	
1 Single Tree		.45	
1 Pole		1.00	
1 Neck Yoke		.45	243.01
	Amount For'd		12111.03

Salisbury Mine.

Amount For'd 12111.03

A N T I Q U A T E D .

Pipe & Fittings.

1 - 6 X 8 X 8 Tee	5.00		
1 - 6 X 10 X 10 "	12.50		
1 - Pr. 12" Flanges	~~4.30~~		
Less 80%	21.50		
	17.20	4.30	
1 - 5" Gate Valve Iron Body	5.00		
1 - 8" " " " "	9.00		
1 - 4" Globe " " "	5.00		
1 - 4" Check " " "	5.00		
	24.00		
Less 80%	19.20	4.80	
Total Antiquated			9.10

R E C O R D .

1 Sand Stone 6 X 3 X 2

1 " " 14½ X 8

1 " " 14½ X 4

Total Salisbury Supplies ---------- 12120.13

Salisbury Mine.

S C R A P .

8960#	Cast (2240)	7.00 Pr. Ton	28.00	
6720#	Wrought (2240#)	5.00 " "	15.00	
260#	Brass	.10 " "	26.00	
150#	Copper	.10 " "	15.00	
		Total Scrap		84.00

Salisbury Mine.

Mine Equipment.

POWER DRILLS.

4 Bars Rand Drills	Scrap)			
2 " " "	)	)		
		)	885.74	
7 No. 2 Rand Drills	Scrap)			
2 No. 2 Rand "		)		
2 No. 3 Rand Drills	$25.50		51.00	
		Total	936.74	
	Less 95% Same as 1899		889.90	46.84
1 No. 3¼ Rand Drill and Tripod			247.20	
	Less 20%		49.44	197.76
5 Hand Drills Buzza Make				
Left off for 1900				
		Total Power Drills		244.60

Salisbury Mine.

Mine Equipment(Continued).

P O R T A B L E M A C H I N E R Y .

1 No. 8 Earle Pump	in	Yard Scrap		147.62
1 No. 9 Earle Pump	"	Yard Scrap		147.62
1 Steam Dome	"	Mine		2.95
2 Winze Hoists	"	Mine	)	
1 Winze Hoist	"	Shop	)	295.24
I50' 2½" Cotton Hose "Poor"				48.99
		Total		642.42
	Less 100 % - 1900			642.42
	(Less 95 % - 1899)			

RECORD.

1 No. 5 Earle Pump	in	Yard
1 No. 6 Earle Pump	"	"
1 Funnel & Pipe for Fan	"	Barn
1 Hand Pump	"	Yard
1 Set Triple Blocks	at	Cliffs Shaft
1 Boiler	"	" "
1 No. 8 Special C. Pump	"	" "
1 No. 8 Knowles Pump	From	" "
1 No. 5 Knowles Pump	"	" "
1 No. 5 Cameron Pump	"	" "
1 No. 4 Duplex Pump	"	" "
1 Single Crab Winch	"	Hard Ore
1 Boring Machine	"	" "
1 Portable Drill	"	" "
1 Pump	"	" "
1 Portable Boiler	"	" "
2 Dump Sleighs	"	" "
1 Winze Hoist	"	Lake

Salisbury Mine.

Mine Equipment(Continued).

CARS, SKIPS and DERRICKS.

2 3/4 Ton Buckets

1 ½ Ton Bucket

1 Timber Cage

2 Top Tram Cars

20 Tram Cars in Mine.

IO Tram Cars, Small in Mine

1 Small Coal Car Engine House

1 Large Coal Car Coal Dock

2 2¼ Ton Skips

1 Platform Cage

Account Closed off 1898.

Salisbury Mine.

Mine Equipment (Continued).

B A R N A C C T .

HORSES.

1 Bay Horse	Ned	150.00	
1 Bay Horse	Dave	150.00	
1 Bay Mare	Nell	70.86	
1 Gray Horse	Prince	94.48	
1 Bay Mule	Mike	100.00	
1 Black Mule	Pat	100.00	
	Total	665.34	
	Less 65 % - 1900	432.47	232.87
	(Less 60 % -1899)		

CARTS, WAGONS and SLEIGHS.

1 Buggy Proportion of Agent's	31.01	
1 Cutter	11.37	
1 Cutter	14.77	
1 Wood Sleigh Broken	8.85	
1 Dump Sleigh Broken	5.90	
1 Small Truck	2.96	
2 Double Wagons	29.52	
1 Single Wagon	5.90	
1 Dump Wagon	5.90	
2 Single Sleighs	17.71	
1 Buggy	20.25	
1 Single Cart	2.36	
Total	156.50	
Less 90 %(Same as 1899)	140.85	15.65

Total Barn Acct. 248.52

IRON CLIFFS CO.

Recapitulation of Salisbury Inventory,

November 30th, 1900.

		Supplies Proper	Supplies Antiquated	Total Amount.
General Supplies		624.95		624.95
Iron & Steel		254.75		254.75
Oil, Grease & Candles		70.44		70.44
Machinery Supplies		523.32	9.10	532.42
Building Material		654.52		654.52
Explosives		165.94		165.94
Mine Timber		4200.99		4200.99
Fuel		5373.11		5373.11
Barn		243.01		243.01
Total		12111.03	9.10	12120.13
Scrap				84.00
MINE EQUIPMENT.		Valuation	Deduction	Net Amt.
Power Drills	- 95%	936.74	889.90	
	- 20%	247.20	49.44	244.60
Cars, Skips & Derricks				
Portable Machinery	- 100%	642.42	642.42	
Barn	- 65%	665.34	432.47	
	- 90%	156.50	140.85	248.52
Total		2648.20	2155.08	493.12
		GRAND TOTAL		12697.25

I R O N C L I F F S C O .

Foster Mine Inventory, November 30th, 1900.

---oOo---

B U I L D I N G S .

1 Frame Engine & Boiler House

1 Frame Office

1 Blacksmith Shop, Frame

1 Frame Barn

1 Frame Coal Trestle

1 Frame Shaft House (Poor)

1 Frame Coal House, Hard Coal

1 Frame Dwelling, 2 Story & Barn - Captain's

3 Frame Dwellings

12 Log Dwellings

P L A N T .

1 20 X 30 Merritt Hoisting Engine

1 6' Merritt Hoisting Drum

1100' 1 1/8" Steel Hoisting Rope

2 Horizontal Tubular Boilers - small

R E C O R D .

1 Rand S.L. Air Compressor	sold Imperial for	1200.00
1,Air Receiver	" " "	50.00

1 Hand Drilling Machine at Tilden

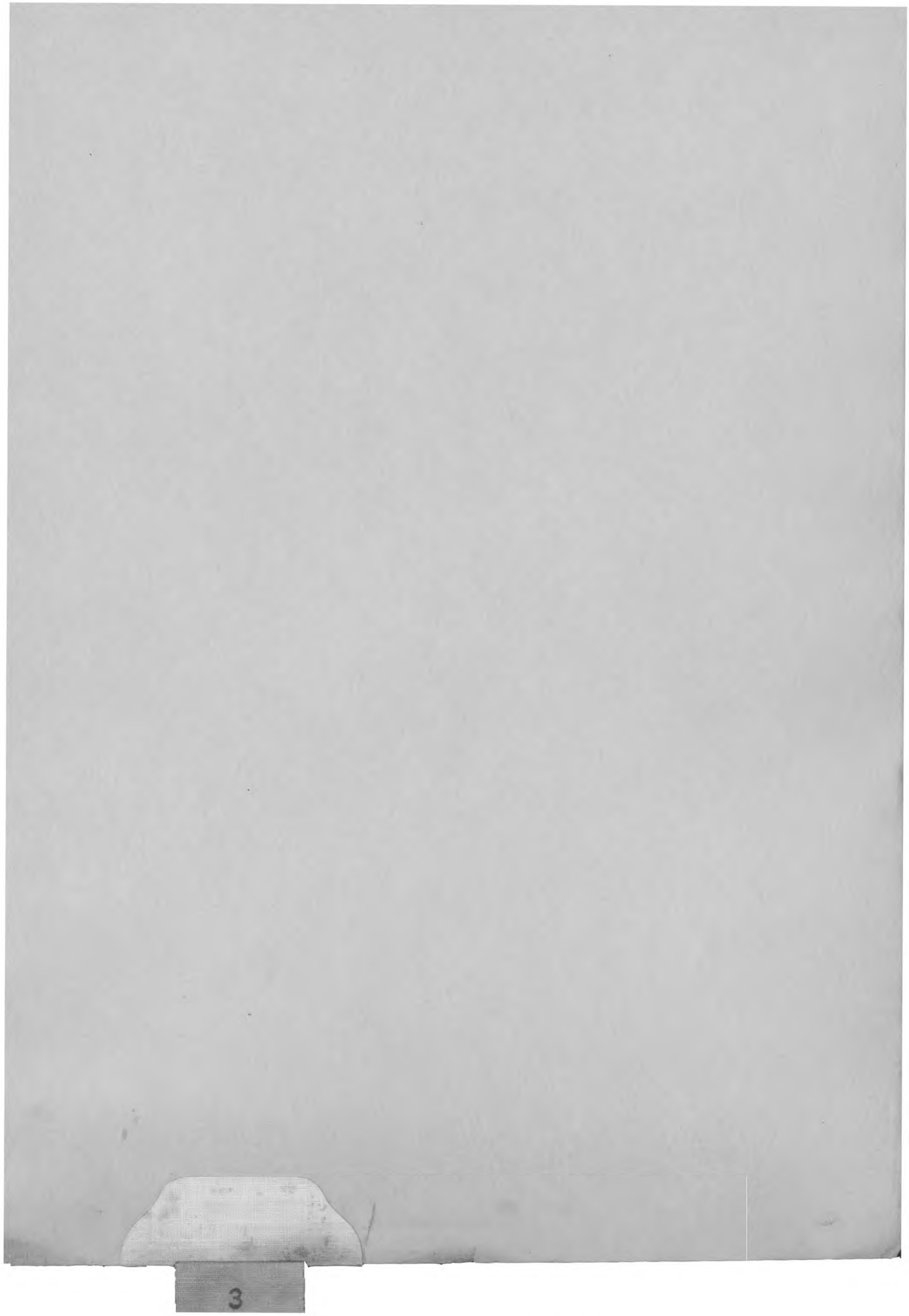
I R O N C L I F F S CO.

Fitch Mine Inventory, November 30th/ 1900.

1 Horizontal Tubular Water Heater 12' X 18" with 32 - 2" Tubes 10' long, stored at Cliffs Shaft.

R E C O R D .

1 - 20 X 32 Slide Valve Engine with 2 5' X 48" Drums Grooved for 1¼" Rope, 13' Fly wheel Lane Pattern Hoisting Plant, sold to Webster for $1457.24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FEB. 2nd, 1900.

Mr. Austin Farrell, Manager,

Gladstone, Mich.

Dear Sir:-

Mr. Mather has referred to me your letter of January 29th, which is an explanation of some apparent discrepancy in the Annual Report of the Chemical Plant, and I note that you deducted the entire shortages occurring during the year from the output during the month of November.

I do not recollect just now, of having written up there to handle it in this manner, as I was under the supposition that when shortages were reported during the year, that Mr. Townsend simply deducted the shortage from the output, during the month in which he received the notice, however, the matter does not cut any very great figure.

Upon reading your letter over, and taking the matter up with Mr. Mather, it is thought best hereafter, to ignore any such shortages, in your accounts. I believe that the majority of these shortages occurred last year, owing to the rough handling of the shipments on the railroads, and the consequent leakage, and it therefore appears to be hardly fair to reduce the output of the chemical plant, by the amount of such shortages. Of course, if the leakage occurred after the alcohol was made, it should not change the fact that the chemical plant had produced the stuff. On the other hand, some of the shortages, if I remember correctly, were owing to errors in gauging, and in cases of this kind it would be fair, that the product of the chemical plant should be reduced accordingly: but, as there are two ways of producing shortages, it would probably result in confusion if we undertook to charge the chemical plant with the one and ignore the other. It was therefore decided best to pay no attention to shortages in the future, so far as your cost sheets or stock accounts are concerned.

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Of course, Mr. Mather will expect just as great care to be used in the gauging, and that every precaution shall be taken to avoid shortages of all kinds, and in case any shortages are reported, I will take them up with you in the usual manner by correspondence, but we will drop them, so far as your accounts are concerned.

Yours truly,

AUDITOR.

WM. G. MAT[illegible] PRES. AND TREAS. J. H. S[illegible]LE, SECRETARY. R. C[illegible]N. AUDITOR. AUS[illegible] FARRELL, MANAGER.

The Cleveland-Cliffs Iron Co.

PIONEER FURNACE.

REFINED WOOD ALCOHOL. GRAY ACETATE OF LIME.

LAKE SUPERIOR CHARCOAL PIG IRON.

FURNACE AND CHEMICAL WORKS, GLADSTONE, MICHIGAN.

GLADSTONE, MICH. Jan. 29th, 1900

Mr. W. G. Mather, President,

Cleveland, Ohio.

Ans [illegible]

ANNUAL REPORT
"Chemical Plant."

Dear Sir:-

Replying to your letter of Jan. 6th in regard to apparent discrepancies in my annual report. Would state that the difference in alcohol for the month of November was due to our deducting from that month several small shortages which had occurred during the year and reported at various times by Berry Brothers. These shortages were all deducted from the month of November so as to include them in our fiscal year under directions from Mr. Mann. I naturally supposed that Mr. Mann had informed you of this fact. Of course Dr. Hudson had no right to deduct any alcohol from the month's statement as it would have been misleading and made valueless our chemical records. The difference in cordage arises from the fact that we got smoke from kilns which had been filled the latter part of the preceding month and were still burning after the end of the month and therefore taken into account in the next month's statement.

Also note your remarks regarding Manistique and will keep you posted as far as I am able to.

Yours truly,

Austin Farrell Manager

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JAN.26th,1900.

Mr. Austin Farrell, Manager,

Gladstone, Mich. ANNUAL REPORT. CHEMICAL PLANT.

Dear Sir:-

I noticed a discrepency between your detached sheets and your record of the Chemical Plant . The latter states that in November you carbonized 3996 cords and obtained 13892 gallons. Your monthly sheet in detail for the month shows "Cords carbonized 3,870.24, and gallons produced 13,831". The totals of these two sheets agree with the totals on your special annual sheet, showing comparison for years 1898 and 1899.

Please explain.

Yours truly,

President.

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THE CLEVELAND CLIFFS IRON COMPANY

PIONEER FURNACE DEPARTMENT

ANNUAL REPORT

1900

GLADSTONE - MICHIGAN

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Mr. W. G. Mather, President,

Cleveland, Ohio.

Dear sir:-

I herewith submit report covering the operations of the Pioneer Furnace department of the Cleveland Cliffs Iron Company for the Year ending November 30th, 1900. I trust you will not fail to bear in mind that owing to the stopage of the furnace for nearly two months during the fiscal year 1899 for relining etc. renders it impossible to make comparative tables of any value as compared with the work done in 1900. It was not until the year 1900 that we got the full benefit from the reduction of fuel charge to 1200 pounds.

FURNACE OPERATING

The furnace was in blast during the year 1900 about 361 days, about four days being lost due to the time taken up in cleaning stoves.

	1900	1899
Total time delayed - - - - -	236.08 hrs.	1580.12 hrs.
Avg.delay per day exc.of cleaning stoves-	39.2 min.	39.3
Avg. tons made per hour - - - -	4.41	4.23
Total number of casts for year- - -	1443	1196
Avg.tons per cast - - - - -	26.4	26
Avg.tons per day - - - - -	106	101.6
Avg.burden per year,-ORE - - - -	3030	3053
Avg.burden for year,-LIMESTONE- - -	184	199
Avg.burden for year,-CHARCOAL - - -	1200	1270
Total average burden for year - - -	4414	4522

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	1900	1899
Total number of full charges for year -	53559	42779
Total number of blanks - - - -	0	0
Total number of charges - - - -	53559	42779
Average number of charges per day - -	148.4	139.3
Average heat of Stove No.1 for year -	1150	1136
Average heat of Stove No.2 for year -	1158	1152
Average steam pressure for year - -	98	96
Average blast pressure - - - -	7.1	8.1
Average revolutions of engines - -	41	39

COMPARATIVE DETAILED STATEMENT OF DELAYS

	1900 Hrs.Min.	1899 Hrs.Min.
Casting - - - - - - -	114 .44	91 .06
Repairing engines - - - - -	.20	46 .15
Cleaning and putting in blow pipes - -	7 .47	8 .21
Repairing hoist - - - - -	.37	1 .15
Cleaning gas flues - - - - -	.15	.35
Repairs stack - - - - - -	.00	6 .30
Replacing cooler plates - - - -	.00	29 .17
Replacing tuyers - - - - -	1 .05	1 .47
Changing gas valves - - - - -	.00	1 .57
Cleaning run - - - - - -	.00	.00
Relining and general repairs - - -	.00	1393 .09
Cleaning and repairing stoves - - -	100 .45	.00
Connecting water purifier - - -	.50	.00
Total delays - - - - - -	226 .23	1580 .12

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Outside of the loss of time cleaning stoves and casting, the delays are so small and purely incidental to furnace running that they require no special explanation. The difference in comparative tables relating to average burden is due to the fact that during the year 1899 our fuel charge was a trifle over 1200 pounds, while during the year 1900 we have adhered to a uniform charge of 1200 pounds with more satisfactory results to the management. There was produced during the year 36,561 tons non-Bessemer pig iron, 1650 tons of Bessemer, making a total for the year 38,211 tons. The following table is a detailed statement of percentages of the different grades produced. The grading system introduced in 1898 and 1899 is still in force and seems to have given satisfaction. We have had fewer complaints than formerly of lack of uniformity.

COMPARATIVE STATEMENT OF PIG IRON MADE

GRADES	1900 TONS	1900 PERCENT	1899 TONS	1899 PERCENT
A Scotch	885	2.3	290	.9
B Scotch	948	2.4	342	1.1
C Scotch	1223	3.2	610	2.0
No. 1 Soft				
No. 1 Special	2074	5.4	1609	5.2
No. 1 Foundry	4220	11.0	3146	10.0
No. 2. Low	4019	10.5	2497	8.0
No. 2. High	4696	12.2	3573	11.4
No. 3. Low	4938	12.9	4494	14.4
No. 3. Medium				
No. 3. High	3024	7.9	2637	8.4
No. 3. Malleable	1023	2.7	2818	9.0
No. 4. Low	1832	4.8	2078	6.7
No. 4 High	2819	7.8	2389	7.6
No. 4. Malleable	26	.05	1308	4.2
No. 5.	2391	6.3	1800	5.8
No. 6.	2521	6.5	1682	5.3
Bessemer 2 High	129	.3		
Bessemer Foundry	25	.05		
Bessemer 3 High	35	.05		
Bessemer 4 Low	51	.1		
Bessemer Special	1384	3.5		
Bessemer 2 Low	26	.05		
TOTAL:-	38289	100	31193	100

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There was consumed during the year the following quantities of material:

ORE	USED Tons	Lbs.	PERCENTAGE	OVERRUN Tons	Lbs.	SHORTAGE Tons	Lbs.
Lake	39788	1505	54.9				
Salisbury	16917	890	23.6				
Foster	2781	1323	03.8				
Cliffs Shaft	8201	1502	11.3	111	1000		
Section 12	1115	970	01.5	34	194		
Bedford	829	340	01.2			24	2034
Lake Bessemer	1891	760	02.6	17	502		
Angeline Hard	774	1510	01.0			1	1382
Tilden Silican	144	1390	0.1	7	84		
Total:-	72444	1230	100	169	1780	26	1176
LIMESTONE	4400	1546					
CHARCOAL	3213995 Bu.					455 bus.	

The average ore yield for the year was 52.8. The bushels of coal per ton of pig iron 84.1. The pounds of limestone per ton of iron 257.

Non-Bessemer yield	52.5 Ore	Bessemer yield	58.7 Ore
Non-Bessemer yield	84.3 Coal	Bessemer yield	78.6 Coal
Non-Bessemer yield	260.0 Flux	Bessemer yield	209.0 Flux

Leaving out the Bessemer yield we find that our ore mixture for the year 1900 was exactly one percent lower than for '99. Our coal per ton of iron was 2.8 bushels lower for the same period, while our limestone per ton of iron also shows a decrease of 12 pounds. This improved work- although we had to contend against a lower ore mixture, is entirely due to the good condition of the furnace which had been running but 14 months on its second blast. I would like to call your attention to the saving on fuel made during the production of Bessemer iron- amounting to over 4 bushels per ton of pig iron produced. This is an object lesson of what could be accomplished if the ore mixture could be correspondingly raised. I think this fuel record is worthy of note when you take into consideration the fact that the furnace made a larger percentage of high silicon iron than ever before and that she was continually changed during the year from soft to hard irons to meet the requirements of our Sales Agent.

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I would recommend in the future that the furnace be run as uniformly as possible and that we do not attempt to make radical changes from low to high grade iron and visa-versa.

There was received during the year the following quantities of material:

GRADE OF ORE	On Hand Dec. 1,1899	Amount Received	T O T A L
Lake	2071 15	43157 950	45228 965
Lake Bæsemer		1891 760	1891 760
Salisbury	259 420	18664 470	18923 890
Foster	3978 483		3978 483
Cliffs Shaft	3400 122	8249 1380	11649 1502
Bedford		829 340	829 340
Tilden		144 1390	144 1390
Section 12		1452 2070	1452 2070
No. 1 Hard Angeline		774 1510	774 1510
TOTAL:- - -	9708 1040	75163 2150	84872 950
CHARCOAL	21000 bus.	3225180 bus.	3246180 bus.
LIMESTONE	3066 1876	2945 1670	6012 1306

The cost of stock per ton of iron during 1900 was as follows:-

O R E S	TONS	LBS	PRICE	COST PER TON
Lake	39788	1505	2.332	2.429
Salisbury	16917	0890	2.229	.988
Foster	2781	1323	1.428	.103
Cliffs Shaft	8201	1502	2.813	.604
Section 12	1115	0970	1.846	.054
Bedford	829	0340	3.024	.066
Lake Bessemer	1891	0760	4.472	.221
No. 1 Angeline Hard	774	1510	5.200	.105
Tilden Silican	144	1390	1.887	.007
TOTAL:- - - -	72444	1230	2.400	4.577
LIMESTONE	4400	1546	.792	.092
CHARCOAL	3213995 bus.		.0621	5.229

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There was consumed during the year 3,213,995 bushels of charcoal at an average cost delivered at the furnace of .0621. The cost of pig iron for the year was $12.92 as against $10.74 for the preceeding year, making an increase of $2.18 per ton over the year '99.

The following is a statement showing comparative costs:-

	1900	1899	INCREASE	DECREASE
General Expense	.500	.593		.093
Maintenance	.178	.194		.016
Operating	1.119	1.018	.101	
Stock	9.898	7.718	2.180	
Depreciation	.798	.777	.021	
Loading	.083	.095		.012
TOTAL: - - -	12.576	10.395	2.302	.121
Cleveland Office Exps.	.350	.350		
TOTAL: - - -	12.926	10.745	2.181	

Analyzing this statement we find that three items have decreased- making a total saving of 12.1¢. They are General Expense, Maintenance and Loading. The decrease in the first two items is due to an increased output and the better condition of the furnace. The saving in loading is largely due to the fact that our iron was better located on the yard for shipment and we were able to cut down our contractors.

Taking up the items showing an increase in their regular order- we find that operating has gone up 10.1¢ per ton, .4¢ is due to an increase in wages, 1.7¢ to additional cost of handling cinder made necessary by the longer haul and filling up around buildings. While 8¢ is due to five additional men employed around the furnace, made necessary by the scarcity of labor and the refusal of the men to work unless their demands were granted.

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Two of these men represent additional coal forkers, two bottom fillers and one iron carrier. You will note an increase of $2.18 in the cost of stock. This is due to the increased cost of ore, charcoal and limestone:- ore having advanced $1544 per ton of iron, limestone .4¢, charcoal 63.2¢. Depreciation has increased 2.1¢ per ton, due to sinking off an increased improvement account. The total increases therefor amount to $2.302 per ton, which are offset by a saving of 12.1¢, making a net increase per ton of pig iron for the year 1900 over 1899- $2.181. There was shipped during the year a total of 39758 tons, of this amount 21677 tons were forwarded by rail, 18081 by vessel. The average cost of loading cars was 8.3¢, being a decrease of 1.2 per ton over the preceding year. The cost of loading vessels was 12.7¢- being an increase of 2.3¢ over the preceding year. This increase was entirely due to the advance in wages demanded by the dock laborers. The excess shipments over production were 1547 tons. We closed the season of navigation with 448 tons pig iron on the dock as against 1995 in 1899,- showing a reduction of 1547 tons in stock carried at the furnace. The following betterments were added to the furnace plant during the fiscal year. A water purifying plant at a cost of$765.00.The addition of this plant has been a great saving to us in labor and the maintenance of the boilers and has more than met our expectations. Our machine shop burned down early in the year and was replaced with a brick structure carrying an iron roof. We also added additional tools and now have a first class well equipped shop which cost us $2364.29. A new laboratory was added to the equipment made necessary by the increased amount of work required both at the furnace and chemical plant- which cost us $1606.71. The locomotive house was veneered with brick at a cost of $252.10 for the purpose of fire protection. A locomotive water tank was built to enable us to procure pure water for the locomotive at a cost of $80.66. A well was sunk at the Founder's residence costing $331.78.

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Previous to the sinking of this well all water had to be hauled to his house in barrels with considerable expense and inconvenience.

At the close of the fiscal year the furnace had finished her 14th consecutive month on her second blast and so far as we could judge was in first class condition. The repairs and betterments installed during the preceding year have more than met our expectations. We have not had a single breakout around the bosh, have lost but one cooling plate and one tuyer in a trifle over 15 months run. The distribution of stock seems to have been improved, we have had no serious slips or mishaps of any kind worth mentioning. The furnace has not been run to her full capacity for the reason that we could not obtain an adiquate supply of charcoal. The winters of 1898 and 1899 were without snowfall on the line of the Northwestern road and this in connection with high prices paid for other wood products practically cut off our coal supply from that source. Had we been able to push the furnace up to her normal production, we would have largely decreased the items of general expense, labor or operating and maintenance. We of course could not controll the market price of commodities and the increase cost of production for this reason would not have been effected one way or the other. The only recommendations I can make for the current year would be in the line of improvement in our pumps and blowing engines. I would suggest the installation of a compound condensing blowing engine and triple supply pumps, which would effect a great saving in steam which could be utilized at our chemical plant. The addition of 200 feet to our stock house which would undoubtedly make an appreciable saving in operating, and the improvement in our ore mixture if possible. What can be done in this line is clearly shown in the output of Bessemer during the past year.

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CHARCOAL SUPPLY

The supply of charcoal for the coming year looks a little more encouraging than for the year '99. The addition of the retort plant at the furnace which is practically completed, if it meets our expectations, will add to our visable supply about 75000 bushels monthly. Our source of supply from the line of the Northwestern Ry. is very uncertain and is becoming more so every year. This is chiefly due to the exhaustion of the wood in that territory and the largely increased price does not seem to stimulate the business. You will doubtless remember that owing to the action of the Ashland Iron & Steel Co. we were compelled to raise the price of coal to 7¢ per bushel F. O. B. cars at kilns. This price still prevails and from what we can learn at this writing there is but little business being done in the way of getting out cord wood. Last year the snow fall was practically nothing and what coal we received from there was obtained from small stocks of wood on the banks of different jobbers carried over from the year before. So far this year the snow fall has been very light in that locality and unless there is an inprovement within the next few weeks we can not expect to receive much coal from the line of the Northwestern. After the expiration of the contract with the Burrell Chemical Co. we were cut off from the bulk of the coal received from the line of the Soo Ry. and as you know have been very short of fuel since last May. The furnace has been run under check and the loss has been considerable owing to the increase in operating and fixed charges- due to the small output. The shortage in fuel bacame more and more marked as the year progressed until the average for the months of October, November and December was less than 100 tons pig iron per day. Assuming that we can increase the output of the furnace to an average of 115 tons per day, we should require monthly 305000 bushels coal.

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Estimating conservatively our kiln and retort plant should produce 235000, leaving the amount of coal to be obtained from outside sources monthly 70000 bushels. Of this amount we are fairly certain of being able to obtain 25000 bushels monthly from three locations on the line of the Soo Ry. viz. St. Jaques 15000, Isabella 8000 and Deloughary 2000. This still leaves 45000 bushels to come from the line of the Northwestern. This amount will have to be obtained from six locations which are all that are left in that territory, divided as follows:-

E. P. Craney	17000	bushels	monthly
Chas. Seymour	12000	"	"
Krutch Bros.	5000	"	"
Dan'l. Jean	4000	"	"
J. B. Frechette	3000	"	"
Perrizo & Sons	1000	"	"
TOTAL:-	42000	"	"

This still leaves a shortage of 3000 bushels per month, which we expect to make up from small stocks of wood on the kiln banks at the Ford River and Felch Mountain locations. We have enough wood on the bank at Ford River to give us an average of 10000 bushels per month and at Felch 3000. It will be our policy however to reserve these locations until the bad months of the year come on and the jobbers are inclined to fall off from their output. The coming year will exhaust the Felch Mountain location and I am inclined to believe that we will be compelled also to stop at Ford River, although it is barely possible that we may succeed in obtaining a little wood from farmers which however will not amount to much. In fact I think this year will practically exhaust the entire Northwestern territory and unless we succeed in making arrangements with the Burrell Chemical Co. at Manistique would recommend the installing of additional retorts at the Gladstone furnace at an early date provided the present plant proves a success. Mr. Berry has approached me with a view to selling us coal in the future but at this writing matters are in such shape that I can not give you any definite idea as to what the outcome will be.

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In addition to our chief source of supply- the Pioneer kilns, we obtained from outside sources last year 1,330,320 bushels coal. Of this amount 571,900 bushels came from the line of the Northwestern Ry. 281,400 bushels were received from Felch and Ford River locations alone, 290,500 bushels were received from jobbers. From this you will note that from all outside sources in that territory we received but 9,100 bushels more than from our two locations. This will emphasize the fact I have been trying to explain and show how rapidly we are exhausting outside resources. From the line of the Soo Ry. we obtained from all sources 740,240 bushels of coal. The bulk of this was received from the Burrel Chemical Co. and was delivered prior to May 1st, 1900. In addition to this we received 18,180 bushels of coal from F. C. Desmond & Co. via. the Ann Arbor. This coal came in during the month of November and cost us 9¢ a bushel F. O. B. cars furnace, Desmond paying a rate of 2¢ per bushel. We were compelled to take this coal to keep the furnace going as our output had gotten down to the neighborhood of 80 tons daily. The increase in the cost of freight on coal received from the Northwestern was due entirely to cars not being filled to their full capacity. We found it impossible to make the jobbers fill up their cars and in fact we were glad to get coal in any shape as we needed it so badly. The decrease in the cost of freight on coal received from the Soo line was due to the fact that after the completion of the contract with the Burrell Chemical Co. we obtained a less rate on coal shipped from St. Jaques, Isabella and Deloughary. If matters take more favorable shape in the Northwestern territory it is our intention to cut the price now paid jobbers for coal, although I am not over sanguine of being able to accomplish anything in this line in the immediate future. The following statement shows the comparative freight paid on charcoal for the years 1900 and 1899:-

571900
290
861

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FREIGHT ON CHARCOAL

	1900 Cost Per Bu.	1899 Cost Per Bu.
FORD RIVER		
Freight on C.&N.W. from location to Larch	.0061	.0060
" " Soo Line to Furnace	.0022	.0022
TOTAL:- - - -	.0083	.0082
FELCH		
Freight on C.&N.W. from location to Larch	.0075	.0074
" " Soo Line to Furnace	.0022	.0022
TOTAL: - - - -	.0097	.0096
OUTSIDE JOBBERS		
Freight on C.&N.W. various places to Larch	.0077	.0075
" from Larch " " " Furnace	.0022	.0021
Total freight on coal over C. & N. W.	.0099	.0096
" " " " " Soo Line only	.0046	.0048
Total freight on coal from outside jobbers	.0061	.0058
Bus. coal over C. & N. W. from Ford River	119680	104020
" " " " " " " Felch	161720	11320
" " " " " " " Various places	290500	208460
" " " Ann Arbor Ferry	18180	
" " " Soo Line only	740240	896780
Total bushels from outside sources - -	1330320	1220580

Note:

Coal from Traverse City via. Ann Arbor Ferry is bought F. O. B. Furnace.

PIONEER FURNACE KILNS

The result of the years operation at the Pioneer Furnace Kilns shows a slight improvement over the preceding year. There has been an increase in bushels per kiln of 43. There has also been an increase of.2 in the bushels per cord of wood carbonized. It is however hard to make a comparison with the preceding year for the reason that the battery was shut down while repairing the furnace in '99. It has been demonstrated however that we now have ample draft facilities and provided we can obtain a regular and uniform supply of wood will experience no difficulty in

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obtaining a maximum output. We have been handicapped this year by the worst weather ever experienced in the early spring and fall. The rainfall being very heavy rendering it simply impossible to get out a sufficient supply of wood with teams. We have made a radical departure in the methods of handling our wood which we hope will overcome these difficulties in the future and from which we hope to derive the benefits within the next few months. During the early part of the year the kilns were on entirely green wood, latterly the character of the wood is improved and this I think accounts for the increase yield noted. We have a large supply of well seasoned wood on hand and hope to avoid trouble incident to the use of green wood in the future.

COMPARATIVE STATEMENT OF KILN OPERATIONS

PIONEER FURNACE KILNS	1900	1899
No. Kilns filled during year	796	628
No. Kilns emptied during year	793	630
Cords wood put into kilns during ear	42815	33888.6
Cords wood in Kilns Dec. 1st, 1899	3030	2708
Total cords	45845	36596.6
Cords wood carbonized during year	42631	33576.6
Balance cords in kilns	3214	3020
Inventory Nov. 30th, 1900 "cords"	3056	3030
Shortage "wood"	158	10
Total bushels coal made during year	1894860	1477706
Average bushels coal per kiln	2389	2346
Average bushels coal per cord	44.4	44.2
Average time turning kiln "days"	23.0	25.3
Average brands per kiln	6.4	6.4
Average cords per kiln	53.8	53.7
Total	60.2	60.1
Average kilns turned per month	66	60
No. of kilns in battery	50	50

Note:-
10 Overrun 1899.

42631 / 158 / 42789) 1894860 (44.3
171156
183300
171156
121440

W O O D S U P P L Y

FORD RIVER LOCATION

This location was again operated intermittently during the year 1900, being used as a balancer to help out the furnace when coal was most needed. The kilns were run from Jan. 1st to Apr. 1st inclusive. Were started again July 1st and ran until Oct. 1st.

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They were therefor in actural operation but six months of the year. They started the year with 1615 cords of wood on the bank. We bought from farmers during the year 1020 cords. The location turned out a total of 119780 bushels. The yield per cord was 45.3 bushels. At this location the price of wood has been gradually increased from $1.25 per cord up to the present time when the price we are now offering is $1.70. The location commences the present year with practically no wood on hand. The indications are that we will get about 3000 cords of wood from the lands of the Iron Cliffs Co. and farmers. This will clean up the Iron Cliffs land and practically the farmers, and it is very doubtful if this location will ever be operated again.

COMPARATIVE STATEMENT OF KILN OPERATIONS

FORD RIVER KILNS	1900	1899
No. kilns filled during year	62	54
No. kilns emptied during year	62	54
Cords wood put into kilns during year	2637½	2484
Cords wood carbonized in kilns	2437½	2339
Total bushels coal made	119680	104020
Average bushels coal per kiln	1930	1926
Average bus. coal per cord	45.3	44.5
Average cords per kiln	42.5	43.3
Average brands per kiln	3.4	2.7
Total cords	45.9	46
Average days turning kilns	25.4	27
No. kilns in battery	8	8

Note:- Kilns shut down April 1st, started again July 1st, shut down Oct. 1st, 1900.

Overrun wood "cords" 131

FELCH MOUNTAIN LOCATION

This location started the year with 3472 cords of wood on the bank, 656 cords were purchased during the year. There was a balance of 313 cords remaining on the bank December 1st, 1900. The kilns were operated during ten months of the year. 161720 bushels of coal were produced. The yield per cord was 42,6 bushels. The lands in connection with this plant are so nearly exhausted that in all probability no effort will be made to operate the

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kilns after the current year. We expect to bank about 1500 cords at the location this year almost entirely from farmers.

COMPARATIVE STATEMENT OF KILN OPERATIONS

	1900	1899
No. kilns filled during year	88	6
No. kilns emptied during year	88	6
Cords wod put in kilns during year	3816.04	282
Cords wood carbonized during year	3816.04	266
Total bushels coal made during year	161720	11320
Average bus. coal per kiln	1837	1886
Average bushels coal per cord	42.6	44.5
Average cords per kiln	43.5	44.3
Average brands per kiln	5.2	2.7
Total cords per kiln	46.7	47
Average days turning kiln	22.5	40
No. kilns in battery	8	8

Note:-
Kilns shut down March 15th, started June 15th.

SECTION 27

This location started the year with 362 cords. There was cut during the year 383 cords, shipped 513 cords, leaving a balance of 232 cords. We had an estimated loss of 100 cords from fire started by a neighboring farmer. At the last measurement the job showed a substantial overrun and we hope this loss will not be serioully felt. There are about 2000 cords of wood remaining as timber on this tract and our plan is to establish a small jobber to clean it up and finish the location.

EAST LAKE KILNS

The general shortage of wood at the various locations made it necessary for us to carbonize more of our own. We secured the use of the East Lake kilns from Mr. Berry; they were in bad shpe. The cost of reclaiming them constututed a large factor but the scheme served its purpose. We shipped there 1932 cords of wood from Parsons tract and received 77,240 bushels of coal. The yield was 41.1 bushels per cord. This location was stopped last week and will be abandoned.

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ST. JAQUES KILNS

At this point we adopted a plan similar to that of East Lake and for the same reasons. The owner of the kilns however filling, burning and emptying them at the current price. We shipped from Parsons tract to this point 2119 cords of wood, received 87726 bushels of coal, the yield being 41.4 bushels per cords. We have stopped sending wood to this location, the contractor now being able to furnish his own supply. No plats accompany the operations of Felch, Ford River and Section 27 for the reason that no timber was cut on these lands during the past year.

PARSONS JOB

Refer to plat "A"

This location entered on its sixth year.under favorable conditions. The difficulty in obtaining choppers having been overcome by a straight advance from $,80 to $1.00 per cord the first day of the preceding September. The force amounted to 179 men. The balance of cords on hand was 28,603 as against 19,362 at the commencement of the preceding year. The rairoad had been extended a distance of 2½ miles. Although this extention ran through a country yielding less wood per mile than other portions of the track, the general layout was favorable. During the preceding two years we have suffered so much on account of an inadiquate supply of dry wood, it was realized that every effort must be made to increase the balance of cords. We took every good man available and the following table shows the average number of men working each month of the year and the amount of wood cut. It will be seen that we kept up a good force through the year until August- when we induced a large number of men to move from this location to the camp at the Mathews Job. Our reason for doing this was because we were accummulating a very considerable fire risk at Parsons while we were not getting a sufficient amount of

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wood at Mathews to insure dry wood from that point the year around and enable us to meet our contract with the railroad company. The effort was successful as will be seen from the report of the Mathews Job.

MONTHS	NO. MEN	CORDS CUT	CORDS SHPED.
December	179	6577.16	3365.08
January	171	6492.08	3809.08
February	153	4547	3829.08
March	151	5127.16	3608.08
April	160	6710	2655.08
May	134	4994.12	3249
June	112	4093	3155.24
July	108	3563.12	2566
August	105	1857.24	3450.24
September	63	1643	2846
October	65	2422	2909
November	65	2797.08	2507.08
Total:-		50825	37961

On hand Dec. 1st, 1899.....28603.08
On hand Dec. 1st, 1900.....41467.08

Gain during year.....12864. cds.

April was a very bad month for hauling and the shipments were reduced to 2655 cords. In fact we had an exceptional wet spring and summer. In May the establishment of a hauling outfit at the Mathews Job commenced to help out the amount of wood received. The total shipments for the year were increased by 2330 cords, notwithstanding the fact that June and July were very bad months and the mud awful. November was still worse. Early in the year we set about to devise methods for overcomming as far as possible the difficulties incident to bad roads and the disadvantages of not being able to secure a uniform and adequate supply of wood. Trips were made to different parts of the state to see what others were doing in similar lines and after careful consideration a system of temporary tracks at frequent intervals and the use of travoix instead of wagons was adopted. This promises to overcome to a considerable degree the difficulty which has been the stumbling block to every charcoal furnace. About three miles of spurs have been graded from the main line into the cord-wood territory

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starting from about the center of the N W¼- S E¼- Sec. 4 as will be seen by reference to plat "A". But little work was done on this system during the past year and we can say but little regarding it until we demonstrate the results by actual working. While we do not expect to materially reduce the cost of hauling, we do hope to obtain a more regular and uniform supply of wood which is the essence of success so far as the running of the furnace and chemical plant is concerned. In some respects the Parsons job is in finer condition than it has ever been before. The 41467 cords of wood on hand is almost in one solid block. On land which has the best of typography and yields from ~~xxxx~~ 40 to 5o cords per acre. The timber to be cut in the next 12 months is an excellent lot. Referring again to plat "A" we deduce the following:- The total acrage of the Parsons tract was 8360. Of this their remains in timber about 2720 acres. We have cut over 67½ percent of the whole and a little less than one-third of the tract remains. If we should continue to operate at the same rate as heretofore- the timber would last three years. The total cords cut for six years just ended amount to 223000 and represents a yield for the territory of a trifle over 39.5 cords per acre. When it is considered that this acreage includes many large areas of burnings, swamps and unproductive country, it will be seen that the tract was very heavily timbered. So far the choppers have been able to occupy three camps. The camp where the office is situated becomming too far from the works for men to walk in the fall of 1900, a new well was sunk at the terminus of Russells Spur and twenty-three houses built around it by choppers and boarding-house keepers. The Company expended no money except in sinking the well. The average number of men working for the year was 122. The average cords cut per man per month was 34.7, being 3.3 less per man than the preceding year. This will go to show that the increased wages did not increase the production per man.

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The price paid for chopping was $1.00 per cord for the first eleven months of the fiscal year. For the last month the price was reduced to $.80 which now prevails. At this figure we have been able to hold our men at Parsons and they are gradually increasing at our other location.

Parsons Well The monthly charge of $1.00 for boarding houses and 50¢ for families returned a revenue from the old well for the year amounting to $329.85. From this must be deducted $70.72 for new pump and maintenance leaving the net revenue $259.13, which we applied to the sinking of a new well at the last camp established- which cost us $311.15. These two wells bid fair to be the most profitable investments made by the Company.

Timber Sales There have been no timber sales made from this tract during the year '99. There is still remaining the elm which reverted to us from our sale to the Buckeye Cooperage Co. There is still time to arrange for its disposal as our cord-wood operations have not as yet seriously interfered with it. The basswood still remains as previously reported, also the birch. We are in correspondence now with Chicago parties relative to the basswood and birch and hope to be able to make you a report later.

TAXES ON PARSONS TRACT

GARDEN TOWNSHIP

We have no personal property in this township. Our reality is made up of the entire section 13-41-18 and the SE¼ Sec. 12-41-18. Owing to the agitation started by the appointment of the taxcommission, our valuations on all our property was raised throughout. A careful examination of the tax rolls showed us that no discrimination had been made, all being treated alike. This explanation will apply to all our property wherever located and will not be repeated. You will note that we have benefited by the working of the new tax law and I do not think we have any cause of complaint. In the year '99 the total valuation of Garden

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Township was $128,000.00. Our valuation being $800.00. The taxes were $50.67. Value per acre being $1.50. For 1900 the total valuation of the township was $500,000.00 being a horizontal raise of nearly 4 to 1. Our valuation however was pla ed at $1600.00, our taxes being $15.51 or a decrease of $35.16. The value per acre being $2.00.

INWOOD TOWNSHIP

The valuation of Inwood Township was increased about 100 percent, being $52,000.00 for the year 1899 and $102,000.00 for 1900. The real estate was taxed $702.59 in '99 and $405.79 in 1900, being a decrease of $296.80. Our real estate for 1899 was $13,560.00 for 1900 $15,484.00. Our personal tax for '99 was $4500.00, being 30¢ per cord on a total of 15000 cords. The taxes amounted to $945.13. For the year 1900 acting under the advice of Mr. Hayden we turned in the full amount of wood on the ground, amounting to 37000 cords. This was taxed at the rate of $1.00 per cord. The actual cost of cutting ~~and hauling~~ amounted to $1375.30, being an increase over the preceding year of $726.97

Harrison Township

This township includes sections 28, 32 and 33-42-17. The valuation for 1899 was $5400.00, taxes $179.95. For 1900 the valuation was $6680.00, taxes $148.13, being a decrease of of $31.82 over the preceding year.

EXTENSION OF PARSON'S RAILROAD

As previously stated no main line has been extended at Parsons during the preceding year. We have however graded about three miles of spurs previously referred to- the location of which are shown on plat "A". This work however was done after the end of the preceding year and will not be included in this report as the track material is not yet on the ground, neither has the Shay engine arrived which was purchased to operate these spurs.

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MATHEWS WOOD JOB

At the commencement of the current year this location was just started. We had a few camp buildings and fifteen men at work. The average number of men chopping in each month and the wood cut and shipped is shown in the statement following:-

MONTH	CHOPPERS	WOOD CUT	WOOD SHIPPED
January	17	169.20	
February	37	676.12	
March	44	813.24	
April	86	2527.08	
May	53	1882.24	266.24
June	51	1690.	1330.24
July	52	1472.16	1140.08
August	67	2653.12	1438.00
September	163	4908.16	1362.16
October	178	6989.16	1465.08
November	120	2755.20	1271.
		26539.08 cds.	8274.16 cds.

From the above we deduce the following: Average number of cords of wood monthly 2412, average number of men working daily 79, average number of cords cut per man per month 30.6. The force increased very slowly although every effort was made to obtain choppers. The price per cord was the same as paid at Parsons and continued in force ~~in force~~ until the first day of November. At the start our men were below the average as we took everyone who came along, including Kentuckians. These men were not satisfactory and with one or two exceptions have been run off the location. The job did not reach its ultimate capacity until the month of October when 178 men cut 6989 cords. The first of November the price of chopping was reduced to 80¢ and I believe we should have held our choppers had it not been for an epidemic of typhoid fever which was caused by the carelessness of the people on the location and prostrated 56 men. Every effort was made to stamp out the disease which we finally succeeded in doing, Five men died, one-hundred men left us through fear or because they were not strong enough to work after recovering. I am glad to say

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