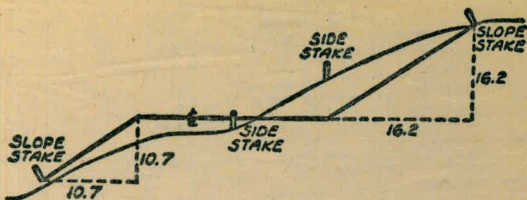


BLACK CANYON TUNNEL  
EQUIPMENT.

W845-G



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING  
SLOPE 1 TO 1. ROADWAY OF ANY WIDTH

	0	.1	.2	.3	.4	.5	.6	.7	.8	9	
0	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0
1	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	1
2	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	2
3	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	3
4	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	4
5	5.00	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	5
6	6.00	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	6
7	7.00	7.10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	7
8	8.00	8.10	8.20	8.30	8.40	8.50	8.60	8.70	8.80	8.90	8
9	9.00	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	9
10	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	10.80	10.90	10
11	11.00	11.10	11.20	11.30	11.40	11.50	11.60	11.70	11.80	11.90	11
12	12.00	12.10	12.20	12.30	12.40	12.50	12.60	12.70	12.80	12.90	12
13	13.00	13.10	13.20	13.30	13.40	13.50	13.60	13.70	13.80	13.90	13
14	14.00	14.10	14.20	14.30	14.40	14.50	14.60	14.70	14.80	14.90	14
15	15.00	15.10	15.20	15.30	15.40	15.50	15.60	15.70	15.80	15.90	15
16	16.00	16.10	16.20	16.30	16.40	16.50	16.60	16.70	16.80	16.90	16
17	17.00	17.10	17.20	17.30	17.40	17.50	17.60	17.70	17.80	17.90	17
18	18.00	18.10	18.20	18.30	18.40	18.50	18.60	18.70	18.80	18.90	18
19	19.00	19.10	19.20	19.30	19.40	19.50	19.60	19.70	19.80	19.90	19
20	20.00	20.10	20.20	20.30	20.40	20.50	20.60	20.70	20.80	20.90	20
21	21.00	21.10	21.20	21.30	21.40	21.50	21.60	21.70	21.80	21.90	21
22	22.00	22.10	22.20	22.30	22.40	22.50	22.60	22.70	22.80	22.90	22
23	23.00	23.10	23.20	23.30	23.40	23.50	23.60	23.70	23.80	23.90	23
24	24.00	24.10	24.20	24.30	24.40	24.50	24.60	24.70	24.80	24.90	24
25	25.00	25.10	25.20	25.30	25.40	25.50	25.60	25.70	25.80	25.90	25
26	26.00	26.10	26.20	26.30	26.40	26.50	26.60	26.70	26.80	26.90	26
27	27.00	27.10	27.20	27.30	27.40	27.50	27.60	27.70	27.80	27.90	27
28	28.00	28.10	28.20	28.30	28.40	28.50	28.60	28.70	28.80	28.90	28
29	29.00	29.10	29.20	29.30	29.40	29.50	29.60	29.70	29.80	29.90	29
30	30.00	30.10	30.20	30.30	30.40	30.50	30.60	30.70	30.80	30.90	30
31	31.00	31.10	31.20	31.30	31.40	31.50	31.60	31.70	31.80	31.90	31
32	32.00	32.10	32.20	32.30	32.40	32.50	32.60	32.70	32.80	32.90	32
33	33.00	33.10	33.20	33.30	33.40	33.50	33.60	33.70	33.80	33.90	33
34	34.00	34.10	34.20	34.30	34.40	34.50	34.60	34.70	34.80	34.90	34
35	35.00	35.10	35.20	35.30	35.40	35.50	35.60	35.70	35.80	35.90	35
36	36.00	36.10	36.20	36.30	36.40	36.50	36.60	36.70	36.80	36.90	36
37	37.00	37.10	37.20	37.30	37.40	37.50	37.60	37.70	37.80	37.90	37
38	38.00	38.10	38.20	38.30	38.40	38.50	38.60	38.70	38.80	38.90	38
39	39.00	39.10	39.20	39.30	39.40	39.50	39.60	39.70	39.80	39.90	39
40	40.00	40.10	40.20	40.30	40.40	40.50	40.60	40.70	40.80	40.90	40
41	41.00	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80	41.90	41
42	42.00	42.10	42.20	42.30	42.40	42.50	42.60	42.70	42.80	42.90	42
43	43.00	43.10	43.20	43.30	43.40	43.50	43.60	43.70	43.80	43.90	43
44	44.00	44.10	44.20	44.30	44.40	44.50	44.60	44.70	44.80	44.90	44
45	45.00	45.10	45.20	45.30	45.40	45.50	45.60	45.70	45.80	45.90	45
46	46.00	46.10	46.20	46.30	46.40	46.50	46.60	46.70	46.80	46.90	46
47	47.00	47.10	47.20	47.30	47.40	47.50	47.60	47.70	47.80	47.90	47
48	48.00	48.10	48.20	48.30	48.40	48.50	48.60	48.70	48.80	48.90	48
49	49.00	49.10	49.20	49.30	49.40	49.50	49.60	49.70	49.80	49.90	49
50	50.00	50.10	50.20	50.30	50.40	50.50	50.60	50.70	50.80	50.90	50

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

TABLE XIII—CORRECTIONS FOR TANGENTS AND EXTERNALS

These corrections are to be added to the approximate values, found by dividing the tangent, or external, for a 1° curve (Table VIII) by the degree of curve, in order to obtain the true tangents, or externals. Intermediate values may be obtained by interpolation.

FOR TANGENTS ADD

Central Angle	DEGREE OF CURVE													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.03	.06	.09	.13	.16	.19	.22	.25	.28	.31	.34	.38	.42	.46
15°	.04	.10	.14	.19	.24	.29	.34	.39	.45	.51	.53	.58	.63	.68
20°	.06	.13	.19	.26	.32	.39	.45	.51	.58	.65	.72	.79	.84	.90
25°	.08	.16	.24	.33	.40	.49	.58	.67	.75	.83	.90	.99	1.06	1.14
30°	.10	.19	.29	.39	.49	.59	.69	.79	.89	.99	1.09	1.20	1.29	1.39
35°	.11	.22	.34	.47	.58	.69	.79	.81	.92	1.04	1.29	1.42	1.54	1.66
40°	.13	.26	.40	.53	.67	.80	.93	1.06	1.20	1.34	1.49	1.64	1.79	1.94
45°	.15	.30	.44	.60	.76	.91	1.06	1.21	1.37	1.52	1.70	1.87	2.04	2.21
50°	.17	.34	.51	.68	.85	1.02	1.19	1.36	1.54	1.72	1.91	2.10	2.29	2.48
55°	.19	.38	.57	.76	.95	1.14	1.32	1.52	1.72	1.92	2.14	2.35	2.56	2.77
60°	.21	.42	.63	.84	1.05	1.27	1.49	1.71	1.94	2.17	2.38	2.60	2.83	3.07
65°	.23	.46	.69	.93	1.16	1.40	1.64	1.88	2.13	2.38	2.63	2.88	3.13	3.39
70°	.25	.51	.76	1.02	1.28	1.54	1.80	2.06	2.33	2.60	2.88	3.16	3.44	3.72
75°	.27	.56	.83	1.12	1.40	1.69	1.98	2.27	2.57	2.87	3.16	3.47	3.78	4.09
80°	.30	.61	.91	1.22	1.53	1.84	2.15	2.46	2.78	3.10	3.44	3.78	4.12	4.46
85°	.33	.66	1.00	1.33	1.68	2.02	2.36	2.70	3.05	3.40	3.77	4.14	4.55	4.89
90°	.36	.72	1.09	1.45	1.83	2.20	2.57	2.94	3.32	3.70	4.10	4.50	4.91	5.32
95°	.39	.79	1.19	1.55	2.00	2.40	2.80	3.20	3.61	4.02	4.40	4.98	5.38	5.83
100°	.43	.86	1.30	1.74	2.18	2.62	3.06	3.50	3.95	4.40	4.88	5.37	5.85	6.34
110°	.51	1.03	1.56	2.08	2.61	3.14	3.67	4.21	4.76	5.31	5.86	6.43	7.01	7.60
120°	.62	1.25	1.93	2.52	3.16	3.81	4.45	5.11	5.77	6.44	7.12	7.80	8.50	9.22

FOR EXTERNALS ADD

Central Angle	DEGREE OF CURVE													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.001	.003	.004	.006	.007	.008	.009	.011	.012	.014	.015	.017	.018	.020
15°	.003	.007	.010	.014	.018	.023	.027	.029	.032	.035	.039	.043	.047	.051
20°	.006	.011	.017	.022	.028	.034	.038	.045	.051	.057	.063	.070	.076	.083
25°	.009	.018	.027	.036	.046	.056	.065	.074	.083	.093	.106	.120	.127	.135
30°	.013	.025	.038	.051	.065	.078	.090	.103	.116	.129	.149	.170	.179	.188
35°	.018	.035	.054	.072	.086	.109	.131	.153	.175	.197	.213	.230	.247	.264
40°	.023	.046	.070	.093	.117	.141	.172	.203	.234	.265	.277	.290	.315	.341
45°	.030	.060	.093	.119	.153	.184	.216	.254	.289	.325	.351	.378	.411	.445
50°	.037	.075	.116	.151	.189	.227	.266	.305	.345	.384	.425	.467	.508	.550
55°	.046	.093	.142	.188	.236	.283	.332	.381	.420	.479	.530	.582	.641	.700
60°	.056	.112	.168	.225	.283	.340	.398	.457	.516	.575	.636	.697	.774	.851
65°	.067	.135	.204	.273	.343	.412	.483	.554	.625	.697	.771	.845	.922	1.01
70°	.080	.159	.240	.321	.403	.485	.568	.652	.735	.819	.906	.994	1.08	1.17
75°	.095	.182	.266	.353	.440	.528	.617	.707	.797	.887	.977	1.07	1.18	1.29
80°	.110	.220	.332	.445	.558	.671	.787	.903	1.02	1.13	1.25	1.38	1.50	1.62
85°	.128	.259	.391	.524	.657	.790	.926	1.06	1.20	1.34	1.47	1.62	1.76	1.91
90°	.149	.299	.450	.603	.756	.910	1.07	1.22	1.38	1.54	1.70	1.87	2.03	2.20
95°	.174	.350	.522	.706	.885	1.06	1.25	1.43	1.62	1.80	1.99	2.18	2.38	2.58
100°	.200	.401	.604	.809	1.01	1.22	1.43	1.64	1.85	2.06	2.28	2.50	2.73	2.96
110°	.268	.536	.806	1.08	1.35	1.63	1.91	2.20	2.48	2.76	3.05	3.35	3.66	3.96
120°	.360	.721	1.08	1.45	1.82	2.19	2.57	2.95	3.33	3.72	4.11	4.50	4.91	5.32

THIS BOOK LISTS MACHINE TOOLS AND  
POWER DRIVEN EQUIPMENT ONLY - SEE  
MATERIAL BOOK FOR HAND TOOLS AND  
EXPENDABLE MATERIALS RECEIVED.

DATE:	NO.	EQUIPMENT	HOURS:	RATE:
DEC. 15, '52.	1	TD18-DOZER.	8.0	\$12.00
	1	3/4 TON TRUCK	8.0	
" 16, "	1	3/4 TON TRUCK	8.0	
	1	TD18 DOZER	8.0	\$12.00
	1	RIPPER	0.5	\$2.50
	1	CARRYALL, 9YDS.	4.0	\$2.50
" 17, "	1	3/4 TON TRUCK	2.0	
	1	TD18 DOZER	2.0	\$12.00
	1	AIR COMPRESSOR	2.0	\$2.25
" 18, "	1	3/4 TON TRUCK.	8.0	
	1	TD18 DOZER	8.0	\$12.00
	1	RIPPER	0.5	
	1	CARRYALL, 9YDS.	2.0	\$2.50
	1	AIR COMPRESSOR	8.0	\$2.25
" 19, "	1	3/4 TON TRUCK	8.0	
	1	AIR COMPRESSOR	8.0	\$2.25
" 22, "	1	3/4 TON TRUCK	8.0	
	1	AIR COMPRESSOR	2.0	\$2.25
" 23, "	1	3/4 TON TRUCK	8.0	
" 24, "	1	" "	8.0	

DATE.	NO.	EQUIPMENT.	HOURS	RATE.
DEC. 29, '52.	1	3/4 TON TRUCK	8.0	
" 30, "	1	" "	8.0	
" 31, "	1	" "	8.0	
	1	AIR COMPRESSOR 560	0	

NOTE: ONLY EQUIPMENT USED WILL BE LISTED EACH DAY, EXCEPT THAT ALL EQUIPMENT RECEIVED WILL BE SHOWN ON THE DAY OF DELIVERY.

Dozer delivered by Citizens Trans. Co.

JAN. 5, 1953.	1	3/4 Ton Truck	8.0	
" 6, "	1	3/4 Ton Truck	8.0	
" <del>5</del> , "	1	D-8 DOZER	8.0	
" 5, "	1	D-8 DOZER	RECEIVED.	
" 6, "	2	SIZE 8x2x4 FAIRBANKS-MORSE PUMPS	RECEIVED.	
" 5, "	1	WELDING GENERATOR	RECEIVED.	
" 7, "	1	3/4 Ton Truck	4.0	
" " "	1	D-8 Dozer	2.0	
" 8, "	1	3/4 Ton Truck	8.0	
" " "	1	Welding machine	4.0	
" 9 <del>th</del> , "	1	3/4 Ton Truck	8.0	
" 12, "	1	3/4 Ton Truck	8.0	
" " "	1	D-8 Dozer	2.0	
" " "	1	Welding machine	6.0	

	DATE:	No.	EQUIPMENT.	HOURS WORKED.
	JAN. 13, '53.	1	3/4 Ton Truck	8.0
		1	19-8 Doyer	1.0
		1	Welding Machine	1.0
	JAN. 14, '53.	1	3/4 Ton Truck	8.0
	JAN. 15, '53.	1	3/4 Ton Truck	8.0
		1	19-8 Doyer	6.0
Delivered by Shea Co. Truck.		2	MUCK CARS - 1 YD. CAP.	REC'D.
	JAN. 16, '53	1	3/4 Ton truck	8.0
		1	19-8 Doyer	8.0
	JAN. 19, '53.	1	3/4 Ton truck	8.0
	JAN 20, '53.	1	3/4 Ton truck	8.0
		1	19-8 Doyer.	0.5
Bill Vogel's truck used to haul lumber from <sup>Julien</sup>		1	Stake body truck	4.0
Delivered by Shea Co. Truck.		9	MUCK CARS	REC'D.
	JAN. 21, '53	1	3/4 Ton truck	8.0
Bill Vogel's truck used to haul lumber from Julien		1	Stake body Truck	3.0
	JAN. 22, '53.	1	3/4 Ton truck	8.0
		1	19-8 Doyer	2.5
JAN. 23. 1 EMCO LOCOMOTIVE AND 1 EMCO MUCKING MACHINE REC'D. BOTH NEW.	JAN. 23,	1	3/4 Ton truck	8.0
		1	19-8 Doyer	4.0

Delivered by Hla Co. Truck #40.

"

DATE:	NO.	EQUIPMENT:	HOURS WORKED.
JAN. 27, '53	1	D-4600 CAT. WITH 87.5 KVA ELECT. GENERATOR	RECV'D.
"	2	INTERNATIONAL, GASOLINE GENERATORS, 9.4 KVA, 7.5 K.W.	RECV'D.
JAN. 26, '53	1	3/4 Ton Truck	8.0
"	1	560 Air Compressor	8.0
"	1	Mucking Machine	8.0
"	1	Air Locomotive	1.0
JAN. 27, '53	1	3/4 Ton Truck	8.0
	1	560 Air Compressor	8.0
	1	Mucking Machine	2.0
	1	Air Locomotive	2.0
	1	D-8 Digger	1.0
JAN. 28, '53	1	3/4 Ton Truck	8.0
	1	Air Compressor	8.0
	1	MUCKING Machine	8.0
	1	Locomotive	8.0
	1	D-8 Digger	1.0
	1	WELL PUMP, COMPLETE.	RECV'D.

NOTE: TIME THIS PUMP RUNS WILL NOT BE LISTED.  
RUNS INTERMITTENTLY, AS WATER LEVEL RISES.

Pumping water

DATE:	NO.	EQUIPMENT	HOURS WORKED
JAN. 29, '53	1	3/4 ton truck	8.0
"	1	Air Compressor	8.0
"	1	Trucking machine	8.0
"	1	Locomotive	8.0
"	1	Diesel-Elect. Generator	10.0
"	1	Welding generator	6.0
"	1	Swedish Drill	2.5
JAN. 30.	1	3/4 ton truck	8.0
"	1	Air Compressor	8.0
"	1	Trucking machine	8.0
"	1	Locomotive	8.0
"	1	Diesel-Elect. Generator	7.0
"	1	Welding machine	8.0
"	1	Swedish Drill	3.0
FEB. 2, '53.	1	3/4 Ton truck	8.0
	1	Air locomotive	8.0
	1	Air Compressor 560 G.P.M.	8.0
	1	Trucking machine	8.0
	1	Welding generator	4.0



Blower delivered by Shear Co. truck.

" W.L. MCGONIGLE Co. Inv. #127. (\$1545<sup>00</sup>)

SHEAR Co. No. 374 FOR REBUILDING BLOWER #159.19.

DATE:	NO.	EQUIPMENT.	HRS.
FEB. 3, '53	1	3/4 Ton truck	8.0
	1	Air Compressor 560 C.F.M.	8.0
	1	Air locomotive	8.0
	1	Trucking machine	8.0
	1	Welding generator	8.0
	1	SUTORBILT BLOWER, 12" X 30"	REC'D.
FEB. 4, '53	1	3/4 ton truck	8.0
	1	Air Compressor 560 C.F.M.	8.0
	1	Trucking machine	8.0
	1	Air locomotive	8.0
	1	Elect. generator 37.5 K.V.A.	8.0
	1	Welding generator	8.0
FEB. 5, '53.	1	3/4 ton Truck	8.0
	1	Air compressor 560 C.F.M.	8.0
	1	Air locomotive	8.0
	1	Trucking machine	8.0
	1	Welding machine	8.0
	1	Elect. generator 37.5 KVA	8.0
	1	D-8 Doyer	0.5

Doyer used to move Air Blower into Portal.

DATE:	NO.	EQUIPMENT.	HRS. WORKED.
FEB. 6 '58.	1	3/4 Ton truck	8.0
	1	Air Compressor 560 C.F.M.	8.0
	1	Air locomotive	8.0
	1	Trucking machine	8.0
	1	Welding generator	8.0
	1	Elect. generator 87.5 K.V.A.	8.0
	1	Blower	8.0
FEB. 7, '58	1	3/4 Ton truck	8.0
	1	Welding generator	2.0
FEB. 9, '58.	1	3/4 Ton truck	8.0
	1	Air compressor 560 C.F.M.	8.0
	1	Blower	8.0
	1	Air locomotive	8.0
	1	Trucking machine	8.0
	1	Welding generator	6.0
	1	Elect. generator 87.5 K.V.A.	8.0
FEB. 10, '58	1	3/4 Ton truck	8.0
	1	Air compressor	8.0
	1	Blower	8.0

DATE:	No.	EQUIPMENT.	HRS. WORKED.
FEB. 10, '53	1	Elect. generator	8.0
Cont'd.	1	Welding generator	6.0
	1	Air locomotive	8.0
	1	Trucking machine	8.0
FEB. 11,	1	34 ton truck	8.0
	1	Air compressor <sup>560 C.F.M.</sup> 27.5 KVA.	8.0
	1	Blower	2.0
	1	Air locomotive	8.0
	1	Trucking machine	8.0
	1	Elect. generator 27.5 K.V.A.	8.0
	1	Welding generator	8.0
FEB. 12, '53.	1	34 ton truck	8.0
	1	Air compressor 560 CFM	8.0
	1	Elect. generator 27.5 KVA.	7.5
	1	Air locomotive	8.0
	1	Trucking machine	8.0

TOO COLD IN HEADING - BLOWER USED ONLY FOR SHORT  
TIME FOLLOWING EACH BLAST.

DATE:	No.	EQUIPMENT.	HRS. WORKED.
FEB. 13, '53.	1	3/4 ton truck	8.0
	1	Air Compressor 560 CFM	8.0
	1	ELECT. GENERATOR	8.0
	1	Welding generator	4.0
	1	Trucking machine	8.0
	1	Air locomotive	8.0
	1	Blower	8.0
FEB. 14,	1	3/4 ton truck	8.0
	1	Elect. generator 37.5 KVA.	8.0
FEB. 16,	1	3/4 ton truck	8.0
	1	Air Compressor	8.0
	1	Elect. generator	8.0
	1	Air locomotive	8.0
	1	Trucking machine	8.0
	1	Blower	8.0
	1	Welding generator	4.0

DATE:	No.	EQUIPMENT.	HRS. WORKED.
FEB. 17, '53.	1	3/4 ton truck	8.0
	1	Air Compressor	8.0
	1	Elect. generator	8.0
	1	Air locomotive	8.0
	1	Trucking machine	8.0
	1	Blower	8.0
	1	Welding generator	4.0
FEB. 18, '53	1	3/4 ton truck	8.0
	1	Air Compressor	16.0
	1	Elect. generator	16.0
	1	Air locomotive.	16.0
	1	Trucking machine.	16.0
FEB. 19, '53	1	Blower	16.0
	1	3/4 ton truck	8.0
	1	Air compressor	16.0
	1	Elect. generator	16.0
	1	Air locomotive	16.0
	1	Trucking machine	16.0
1	Blower	16.0	

DATE:	No.	EQUIPMENT.	HRS. WORKED.
FEB. 20, '53	1	3/4 ton truck	8.0
	1	Air compressor	16.0
	1	Elect. generator	16.0
	1	Air locomotive	16.0
	1	Trucking machine	16.0
	1	Blower	16.0
	1	Welding generator	6.0
FEB. 23, '53	1	3/4 ton truck	8.0
	1	Air compressor	16.0
	1	Elect. generator	16.0
	1	Air locomotive	16.0
	1	Trucking machine	16.0
	1	Blower	16.0
	1	SERIAL U.D.F. 11507-21, 114-46015 GENERATOR SET MODEL U.D.-14	RECEIVED.
	2	FLAT CARS FOR R.R. UNIVERSAL - TRAMAIR.	"
	1	AIR LOCOMOTIVE - USED.	"
	1	D-8 Boyer	0.5'

Delivered by Hea Co. truck. Sold by: HAWTHORNE -  
" " MICHAELS VENTURE.

HAWTHORNE  
MICHAELS  
1/2 11<sup>th</sup> / 06.

Anchor clutch shaft broke at 2:30 P.M.

DATE	NO.	EQUIPMENT	HRS. WORKED.
FEB. 24, '33	1	$\frac{3}{4}$ ton truck	8.0
	1	Air compressor	16.0
	1	Elect. generator	16.0
	1	Air locomotive	16.0
	1	Trucking machine	6.0
	1	Blower	16.0
FEB. 25, '33	1	$\frac{3}{4}$ ton truck	8.0
	1	Elect. generator	8.0
FEB. 26, '33	1	$\frac{3}{4}$ ton truck	8.0
	1	Air compressor	16.0
	1	Elect. generator	16.0
	1	Air locomotive	16.0
	1	Trucking machine	16.0
	1	Blower	16.0
FEB. 27, '33	1	$\frac{3}{4}$ ton truck	8.0
	1	Air compressor	16.0
	1	Elect. generator	16.0
	1	Locomotive	16.0
	1	Trucking machine	16.0
	1	Blower	16.0

DATE:	NO.	EQUIPMENT	HRS WORKED:
MARCH 2, '53	1	$\frac{3}{4}$ ton truck	8.0
	1	Air compressor	16.0
	1	Elect. generator	16.0
	1	Trucking machine	16.0
	1	Air locomotive	16.0
	1	Blower	16.0
MARCH 3, '53	1	$\frac{3}{4}$ ton truck	8.0
	1	Air compressor	16.0
	1	Elect. generator	16.0
	1	Trucking machine	16.0
	1	Air locomotive	16.0
	1	Blower	16.0
	1	D-8 Doyer	3.0
MARCH 4, '53	1	$\frac{3}{4}$ ton truck	8.0
	1	Air compressor	16.0
	1	Elect. generator	16.0
	1	Trucking machine	16.0
	1	Air locomotive	16.0
	1	Blower	16.0

Doyer used to level off spoil bank.



DATE:	NO.	EQUIPMENT	HRS. WORKED.
MARCH 5, '53.	1	3/4 ton truck	8.0
	1	Air compressor	16.0
	1	Elect. generator	16.0
	1	Pushing machine	16.0
	1	Air locomotive	16.0
	1	Blower	16.0
	MARCH 6,	1	3/4 ton truck
1		Air compressor	16.0
1		Elect. generator	24.0'
1		Pushing machine	16.0'
2		Air locomotives	32.0'
1		Blower	24.0
1		Welding generator	1.0
MARCH 7.	1	Elect. generator	16.0
	1	Blower	8.0
	1	3/4 ton truck	8.0
MARCH 9.	1	Air compressor	16.0
	1	Elect. generator	16.0
	1	Pushing machine	16.0
	2	DINKEYS	16.0
	1	BLOWER	16.0

Generator and blower used 8 hrs. by Eng. on 3/7/53.

Two air locomotives went into service today.

Used by Inspector, to work in tunnel.

DATE:	No.	EQUIPMENT.	HRS.
MARCH 10, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR 560 C.F.M.	16.0
DISCONTINUED USE OF CATERPILLAR DIESEL-GENERATOR	1	ELECT. GENERATOR 37.5 KVA.	4.0
STARTED USING ROGERS DIESEL-GENERATOR.	1	" " 37.5 KVA.	12.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	1	BLOWER	16.0
	1	WELDING GENERATOR	2.0
MARCH 11, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR	16.0
	1	ELECT. GENERATOR	16.0
	2	AIR LOCOMOTIVES	32.0
	1	MUCKING MACHINE	16.0
	1	BLOWER	16.0
MARCH 12.		SAME AS 3/11	
" 13.		SAME AS 3/11 EXCEPT MUCKER	15.0 HRS.
" 16.		SAME AS 3/11.	
" 17.		SAME AS 3/11	
" 18.		SAME AS 3/11.	

DATE:	No.	EQUIPMENT	HRS.
MARCH 19, '53	1	$\frac{3}{4}$ TON TRUCK	8.0 HRS.
	1	AIR COMPRESSOR, 560 C.F.M.	16.0
	1	ELECT. GENERATOR 37.5 K.V.A.	16.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	1	WELDING GENERATOR	0.5
MARCH 20		SAME AS 3/19 EXCEPT NO WELDING GEN.	
USED BY INSPECTOR WORKING IN TUNNEL. GENERATOR LEFT RUNNING FRIDAY NITE, WITHOUT A LOAD ON IT.	MARCH 21.	1 ELECT. GENERATOR	16
	1	BLOWER	8
	MARCH 23.	1 $\frac{3}{4}$ TON TRUCK	8
	1	AIR COMPRESSOR	16.0
	1	ELECT. GENERATOR	16.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
MARCH 24.		SAME AS 3/23.	

NOTE: MUCKING MACHINE BROKE A DRIVE  
SHAFT AT 9 A.M., OUT OF ORDER REST  
OF DAY. NIGHT SHIFT WORKED 4 HRS. ONLY.

NOTE: MUCKING MACHINE REPAIRED AND IN  
USE ON NIGHT SHIFT. DAY SHIFT DID NOT  
WORK TODAY.

\* NOTE: ELECT. GENERATOR AND BLOWER USED ON  
SATURDAY, 3/28, BY INSPECTOR, TAKING X-SECTIONS.

DOZER USED TO RETRIEVE DUMP BOX OF MUCK CAR  
FROM CANYON BOTTOM.

DATE	NO.	EQUIPMENT	HRS.
MARCH 25	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR	12.5
	1	ELECT. GENERATOR	12.5
	1	BLOWER	12.5
	1	MUCKING MACHINE	1.0
	2	AIR LOCOMOTIVES	24.0
MARCH 26	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR	16.0
	1	ELECT. GENERATOR	16.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	8.0
	2	AIR LOCOMOTIVES	16.0
MARCH 27.	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR	16.0
	1	ELECT. GENERATOR	32.0*
	1	AIR BLOWER	24.0*
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	1	D-8 DOZER	1.0
	1	WELDING GENERATOR	2.0

DATE:	NO.	EQUIPMENT	HRS.
MARCH 30.	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR, 560 D.F.M.	16.0
	1	ELECT. GENERATOR	16.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
MARCH 31.	1	Same as 3/30 EXCEPT	
	1	WELDING GENERATOR	2.0
APRIL 1, '53.	1	CP <sup>7</sup> SLUDGE PUMP, NEW, MODEL A, SERIAL # 861300	RECV'D.
	1*	CP <sup>7</sup> SLUDGE PUMP, USED, MODEL A, NO SERIAL NUMBER.	RECV'D.
	150 FT.	$\frac{1}{2}$ " FIRE HOSE, USED.	RECV'D.
APRIL 1, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR	16.0
	1	ELECT. GENERATOR	16.0
	1	MUCKING MACHINE	16.0
	2	LOCOMOTIVES	32.0
	1	BLOWER	16.0
	1	WELDING GENERATOR	1.0

PICK-UP  
 SHIPPED FROM CAVALCO TUNNEL JOB, IN SHERCO<sub>2</sub> TRUCK.  
 CHICAGO PNEUMATIC TOOL CO. #175-10864. (\*\$45.05)

\*RETURNED TO LAKE MATHEWS JOB APRIL 6.

HOSE ALSO SHOWN IN "MATERIALS" BOOK.

DELIVERED BY SHEA CO. TRUCK FROM CAJALCO.

DATE:	NO.	EQUIPMENT.	HRS.
APRIL 2, '53		SAME AS 4/1 EXCEPT NO WELDING GEN.	
" 3, '53		" " " " " "	"
" 4, "	1	$\frac{3}{4}$ TON TRUCK	8 HRS
" "	1	ELECT. GENERATOR	16 "
" "	1	BLOWER	8 "
APRIL 6 '53.	1	<sup>USED.</sup> T.C.P. SLUDGE PUMP, MODEL REC'D. SER. #49977, WITH 10' LENGTH OF SUCTION HOSE ATTACHED.	
	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR	16.0
	1	ELECT. GENERATOR	16.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	1	SLUDGE PUMP	1.0
	2	SWEDISH DRILLS	32.0
APRIL 7.		SAME AS 4/6/53.	
" 8.		" " " EXCEPT PUMP 2.0 HRS.	
" 9.		" " " " " "	

REBUILT, WITH INSPECTION HOLE AND RELIEF VALVE ADDED.  
 FREIGHT CHARGES ON AIR TANK FROM BERKLEY: \$40.79.  
 COST OF AIR TANK: EIMCO CORP. INV. #40010A (\$271.67)

DATE:	No.	EQUIP	HRS.
APRIL 9, '53	1	EIMCO AIR TANK #48-1953.	REC'D.
" 10.		SAME AS 4/6 EXCEPT NO SLUDGE PUMP.	
APRIL 13, '53.	1	3/4 TON TRUCK	8.0
	1	AIR COMPRESSOR	16.0
	1	ELECT. GENERATOR	16.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	1	SLUDGE PUMP	2.0
	2	SWEDISH DRILLS	32.0
" 14.		SAME AS 4/13.	
" 15.		SAME AS 4/13 EXCEPT:	
	1	SLUDGE PUMP	16.0
	1	D-8 DOZER	8.0
" 16.		SAME AS 4/15 EXCEPT	
	1	D-8 DOZER	5.0
" 17.		SAME AS 4/15 EXCEPT NO DOZER.	
" 18.	1	ELECT. GENERATOR	16.0
	1	BLOWER	8.0

STARTED ROAD TO NORTH PORTAL AT 1:30 P.M.

DOZER BROKE DOWN ABOUT 1:30 P.M. TURNED OUT BEARING

DATE:	NO.	EQUIPMENT	HRS.
APRIL 20, '58	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	Air COMPRESSOR 560 C.F.M.	16.0
	1	ELECT. GENERATOR 97.5KVA.	16.0
	1	BLOWER	16.0
	1	MOCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	SWEDISH DRILLS	32.0
	1	SLUDGE PUMP	16.0
" 21.	SAME	AS 4/20.	
" 22.	SAME	AS 4/20.	
" 23.	SAME	AS 4/20.	
" 24.	SAME	AS 4/20. PLUS 1 WELDING GEN.	1.0
APRIL 24.	1	EIMCO AIR TANK 401. SERIAL No. 44, YEAR 1952.	REC'D
APRIL 25.	1	CATERPILLER GENERATOR	16.0
	1	AIR BLOWER	8.0

NOTE: CATERPILLER GENERATOR USED TODAY.

THIS TANK WAS REMOVED FROM EIMCO LOCOMOTIVE,  
REWORKED BY HAULMAN WELDING WORKS, SAN DIEGO,  
TO PROVIDE AN INSPECTION PLATE AND BE TESTED,  
AND WAS RETURNED TODAY IN THE  $\frac{3}{4}$  TON TRUCK.

HAULMAN'S INV. # 11561; MATERIAL \$27.95 LABOR \$98.00

USED BY INSPECTOR, TAKING X-SECTIONS IN TUNNEL.

GENERATOR LEFT RUNNING FRIDAY NIGHT - NO LOAD ON IT.



DATE:	No.	EQUIPMENT	Hrs.
APRIL 27, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR 560 C.F.M.	16.0
	1	ROGERS ELECT. GENERATOR 77.5 KW	16.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	SWEDISH DRILLS	48.0 32.0
	2	SLUDGE PUMPS	32.0
	" 28, '53	1	$\frac{3}{4}$ TON TRUCK
1		AIR COMPRESSOR	16.0
1		ELECT. GENERATOR - ROGERS.	16.0
1		BLOWER	16.0
1		MUCKING MACHINE	16.0
2		AIR LOCOMOTIVES	32.0
2		SLUDGE PUMPS	32.0
3		SWEDISH DRILLS	48.0
1		WELDING GENERATOR	1.0

SECOND PUMP INSTALLED NEAR HEADING.

DAY SHIFT USED 3 DRILLS - NIGHT SHIFT 2 DRILLS.  
MECH. WELDED PARTS FOR DUMP CARS.

NEW PART MADE AND INSTALLED BY SAM. 4/30.  
 TRAMMAIRE LOCOMOTIVE BROKE AN AXEL AT 2:40 P.M.  
 NEW AIR TANK INSTALLED ON TRAMMAIRE LOCOMOTIVE.

MAY 1: CHANGED OVER TO CATERPILLER GENERATOR.

USED BY INSPECTOR, WORKING IN TUNNEL.

DATE:	No.	EQUIPT.	HRS.
APRIL 29, '33	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR	16.0
	1	ELECT. GENERATOR-ROGERS.	16.0
	1	BLOWER.	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	22.7
	2	SLUDGE PUMPS	32.0
	3	SWEDISH DRILLS	48.0
" 30.	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR	16.0
	1	ELECT. GENERATOR-ROGERS	16.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0
	3	SWEDISH DRILLS	48.0
MAY 1,		SAME AS 4/30.	
" 2.	1	GENERATOR, CAT.	16.0
	1	BLOWER	8.0

DATE:	NO.	EQUIPMENT.	HRS.
MAY 4, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR	16.0
	1	ELECT. GENERATOR - ROGERS	16.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES.	32.0
	2	SLUDGE PUMPS	32.0
	3	SWEDISH DRILLS	48.0
	1	D-8 DOZER	7.0
DOZER RETURNED FROM FOSTER DOB AT 9 A.M. AND STARTED WORK ON NORTH PORTAL ROAD AT 9:30 A.M.			
WORK ON NORTH PORTAL APPROACH CUT STARTED TODAY.	MAY 5, '53	SAME AS 5/4 EXCEPT DOZER	<del>8.0</del>
DOZER BROKE DOWN AT 3:30 P.M. CLOSED FUEL STRAINERS.		AND 1 WELDING GENERATOR.	1.0
DOZER IN OPERATION AT 9 A.M. AT NORTH PORTAL.	MAY 6, '53.	SAME AS 5/4. AND WELDING GENERATOR	1.0
DELIVERED BY SHEP CO. TRUCK AT 3 P.M. UNLOADED AT NORTH PORTAL.	MAY 6, '53	1 RIPPER	REC'D
	MAY 7, '53.	SAME AS 5/4 EXCEPT:	
AT NORTH PORTAL.		1 D-8 DOZER	8.0
		1 WELDING GENERATOR	1.0
NOTE: USED CATERPILLER GENERATOR TODAY.	MAY 8, '53	SAME AS 5/7, EXCEPT NO WELDING GENERATOR USE.	
" " " "	MAY 9.	1 ELECT. GENERATOR - CAT.	16.0
		1 BLOWER	8.0

NOTE: AIR COMPRESSOR BROKE DOWN AT 9 P.M.

DATE:	NO.	EQUIPT.	HRS.
MAY 11, 53.	1	3/4 TON STAKE BODY TRUCK	8.0
	1	AIR COMPRESSOR	13.0
	1	ELECT. GENERATOR-ROGERS	16.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	13.0
	2	AIR LOCOMOTIVES	26.0
	2	SLUDGE PUMPS	26.0
	3	SWEDISH DRILLS	39.0

NOTE: BUCK TOOTH RIPPER RENTED FROM HARRY FOSTER  
AT \$12.00 PER DAY - NOT PRACTICAL DUE TO HARDNESS  
OF GROUND AT NORTH PORTAL - RETURNED SAME DAY.

MAY 12.

NOTE: COMPRESSOR BACK IN SERVICE AT 4 P.M.

1	D-8 DOZER	8.0
1	BUCK FORTE RIPPER.	8.0
1	3/4 TON TRUCK	8.0
1	AIR COMPRESSOR	8.0
1	ELECT. GENERATOR-ROGERS.	16.0
1	AIR BLOWER	16.0
1	MUCKING MACHINE	8.0
2	AIR LOCOMOTIVES	16.0
2	SLUDGE PUMPS	16.0
3	SWEDISH DRILLS	24.0
1	D-8 DOZER	8.0

AT NORTH PORTAL.

NOTE: NOT USING 2ND. SLUDGE PUMP TODAY.

NOTE: NEW PUSHER LEGS INSTALLED ON DRILLS TONITE.

AT NORTH PORTAL.

USED TO UNLOAD COMPRESSOR AND TOW IT DOWN  
RAIN - DOZER DID NOT WORK TODAY. HILL.

DELIVERED IN SBA Co. TRUCK FROM LAKE MATHEWS.

USED BY INSPECTOR WORKING IN TUNNEL.

DATE:	NO.	EQUIPT.	HRS.
MAY 13, '53	1	8 TON TRUCK	8.0
	1	AIR COMPRESSOR	16.0
	1	ELECT. GENERATOR - ROGERS.	16.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	1	SLUDGE PUMP	16.0
	3	SWEDISH DRILLS	48.0
	1	D-8 DOZER	8.0
MAY 14, '53		SAME AS 5/13.	
MAY 15, '53		SAME AS 5/13 EXCEPT:	
	1	WELDING GENERATOR.	0.5
	1	D-8 DOZER <del>NO WORK.</del>	0
	1	GARDNER DENVER COMPRESSOR #4C6676 - W.R.F. 805-70177 315 C.F.M. CAPACITY.	RECD
MAY 16.	1	ELECT. GENERATOR - ROGERS.	16.0
	1	AIR BLOWER	8.0

SMALL COMPRESSOR IN USE AT NORTH PORTAL 9 A.M. - 4<sup>30</sup> P.M.

1 SLUDGE PUMP BEING OVERHAULED.

DAY SHIFT USED ONLY TWO DRILLS TODAY - 2 MEN ABSENT.

AT NORTH PORTAL.

" " "

" " "

DATE:	NO.	EQUIPMENT	HRS.
MAY 18 '58.	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR 560 C.F.M.	16.0
	1	" " 315 "	8.0
	1	ELECT. GENERATOR - ROGERS.	16.0
	1	BLOWER - AIR VENT.	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	1	SLUDGE PUMP	16.0
	3	SWEDISH DRILLS	48.0
	1	D-8 DOLER	8.0
	1	RIPPER	8.0
	2	JACK HAMMERS	16.0
MAY 19.		SAME AS 5/18 EXCEPT:	
	2	SLUDGE PUMPS	16.0
MAY 20.		SAME AS 5/18 EXCEPT.	
	3	SWEDISH DRILLS	48.0
	2	SLUDGE PUMPS	32.0
MAY 21.		SAME AS 5/20 EXCEPT:	
		NO RIPPER AND WELDING GENERATOR	3.0

DATE:	NO.	EQUIPMENT	HRS.
MAY 22, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR, 500 CFM	16.0
	1	" " 315 CFM	8.0
	1	ELECT. GENERATOR	16.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0
	2	JACK HAMMERS	16.0
	3	SWEDISH DRILLS	48.0
	1	D-8 DOZER	8.0
	1	WELDING GENERATOR	2.0
	1	ELECT. GENERATOR	16.0
	1	AIR BLOWER	8.0
		SAME AS 5/22 EXCEPT:	
	1	D-8 DOZER	4.0
	1	RIPPER	4.0
	1	WELDING GENERATOR	4.0

RIPPER NOT IN USE, HAVING PLATE WELDED ON TEETH  
FOR SCRAPPER.

USED BY INSPECTOR, WORKING IN TUNNEL.

BLAKE ARM REPAIRED - 8 A.M. TO NOON.

USED AT NORTH PORTAL.

" " " "

" " " "

" " " "

" " " "

" " " "

DATE:	NO.	EQUIPMENT	HRS.
MAY 26, '53	1	¾ TON TRUCK	8.0
	1	AIR COMPRESSOR, 500 CFM	16.0
	1	ELECT. GENERATOR - ROGERS	16.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	1	SLUDGE PUMP	16.0
	3	SWEDISH DRILLS	48.0
	1	D-8 DOZER	8.0
	1	RIPPER	8.0
	1	AIR COMPRESSOR, 315 CFM	2.0
	2	JACK HAMMERS	4.0
MAY 27		SAME AS 5/26 EXCEPT:	
	1	AIR COMPRESSOR, 315 CFM	8.0
	2	JACK HAMMERS	16.0
	1	WELDING GENERATOR	2.0
MAY 28		SAME AS 5/26 EXCEPT:	
	1	AIR COMPRESSOR, 315 C.F.M.	4.0
	2	JACK HAMMERS	6.0
	1	WELDING GENERATOR	1.0



USED AT NORTH PORTAL, DRILLING ROCK.

" " " " " "

" " " " "

" " " " "

ROGERS GENERATOR BROKE DOWN 8 A.M. TO NOON.

1 PUMP 16 HRS. 1 PUMP 8 A.M. - NOON.

TUNNELING NORTH PORTAL.

" " " "

DATE	NO.	EQUIPMENT	HRS.
MAY 29, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR, 500 C.F.M.	16.0
	1	ELECT. GENERATOR	16.0
	1	AIR BLOWER	16.0
	1	MULCHING MACHINE	16.0
	1	SLUDGE PUMP	16.0
	2	LOCOMOTIVES	32.0
	3	SWEDISH DRILLS	48.0
	1	AIR COMPRESSOR 315 C.F.M.	4.0
	2	JACK HAMMERS	8.0
	1	D-8 DOZER	8.0
	1	RIPPER	8.0
JUNE 1, '53		SAME AS 5/29 EXCEPT: NO DOZER AND RIPPER.	
	1	GENERATOR-INTERNATIONAL	4.0
	1	" - ROGERS	12.0
	2	SLUDGE PUMPS	20.0
	1	AIR COMPRESSOR, 315 C.F.M.	8.0
	2	JACK HAMMERS	16.0

DATE:	NO.	EQUIPMENT.	HRS.
JUNE 2, '53	1	3/4 TON TRUCK	8.0
	1	AIR COMPRESSOR, 500 C.F.M.	16.0
	1	ELECT. GENERATOR - ROGERS	16.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0
	9	SWEDISH DRILLS	48.0
	1	AIR COMPRESSOR, 315 C.F.M.	2.0
	2	JACK HAMMERS	4.0
	1	D-8 DOZER	1.0
	1	RIPPER	1.0
	1	WELDING GENERATOR	2.0
JUNE 3, '53		SAME AS 6/2 EXCEPT:	
	1	AIR COMPRESSOR, 315 C.F.M.	4.0
	2	JACK HAMMERS	8.0
	NO	DOZER, RIPPER, OR WELDING GEN.	

USED AT NORTH PORTAL.

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JUNE 4, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	AIR COMPRESSOR, 500 C.F.M.	16.0
	1	ELECT. GENERATOR, ROGERS.	16.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0
	3	SWEDISH DRILLS	48.0
	1	D-8 DOZER	3.0
	1	RIPPER	1.0
JUNE 5,		SAME AS 6/4 EXCEPT:	
	NO	DOZER OR RIPPER TIME.	
JUNE 6	1	$\frac{3}{4}$ TON TRUCK	8.0
(SATURDAY)	1	AIR COMPRESSOR	8.0
	1	ELECT. GENERATOR-ROGERS.	8.0
	1	AIR LOCOMOTIVE	2.0
JUNE 8.	1	SAME AS 6/5, EXCEPT:	
	1	D-8 DOZER	2.5
	1	WELDING GENERATOR	0.5
JUNE 9.		SAME AS 6/5. EXCEPT	
	2	AIR COMPRESSORS	26.0

USED AT N. PORTAL 1 HR. AND MOVED GENERATOR 2 HRS.

" " " " " "

THREE MEN WORKED IN TUNNEL MOVING CAR PASSENGERS  
AND JACKING UP TRACK, AND MUCKING SIDES.

DOZER MOVED RIPPER AND SIS COMPRESSOR  
FROM N. PORTAL TO S. PORTAL.

SEE NOTE ON NEXT PAGE IN RE COMPRESSORS.

JUNE 9TH.  
 GARDNER-DENVER S15 COMPRESSOR PUT IN USE IN  
 CONJUNCTION WITH 500 COMPRESSOR AT 2 P.M.

JUNE 10TH. 9TH.  
 BOTH ELECT. GENERATORS PUT IN SERVICE TODAY,  
 ONE FOR SOUTH PORTAL AND ABOUT 1,000 FT. OF TUNNEL,  
 AND SECOND OVER CORE HOLE, FEEDING REMAINDER  
 OF TUNNEL. ROGERS - 16 HRS.

3 MEN WORKED IN TUNNEL DIGGING DRAINAGE  
 DITCH BETWEEN RAILS, AND HAULING OUT  
 LOOSE MUCK FROM SAME.

DATE:	NO.	EQUIPMENT.	HRS.
JUNE 10, '33	1	<sup>3</sup> / <sub>4</sub> TON TRUCK	8.0
	2	AIR COMPRESSORS	<del>32.0</del> 26.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	3	SWEDISH DRILLS	48.0
	2	SLUDGE PUMPS	32.0
	1	WELDING GENERATOR	0.5
JUNE 11, '33		SAME AS 6/10 - NO EXCEPTIONS.	
" 12,		SAME AS 6/10 EXCEPT NO WELDING GENERATOR TIME.	
JUNE 13.	1	COMPRESSOR, 600 CFM.	8.0
SATURDAY.	2	ELECT. GENERATORS	16.0
	1	BLOWER	8.0
	1	AIR LOCOMOTIVE	8.0
JUNE 15.		SAME AS 6/10 EXCEPT: NO WELDING GENERATOR TIME.	
JUNE 16.		SAME AS 6/10 EXCEPT: WELDING GENERATOR	1.5

DATE:	No.	EQUIPMENT:	HOURS:
JUNE 17, 53	1	7 TON TRUCK	8.0
	2	ELECT. GENERATORS	32.0
	2	AIR COMPRESSORS	32.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0
	3	SWEDISH DRILLS	48.0
REWORKING MUCK CAR.	1	WELDING GENERATOR	9.5
REMOVED RIPPER IN SHERCO. TRUCK - KENTON.	1	RIPPER	REMOVED
JUNE 18.		SAME AS 6/17 EXCEPT:	
USED TO LOAD RIPPER ONTO SHERCO. TRUCK.	1	D-8 DOZER	0.5
RE-TIPPED THE MUCKING MACHINE BUCKET.	1	WELDING GENERATOR	0.5
JUNE 19.		SAME AS 6/17 EXCEPT:	
USED TO MOVE SMALL ELECT. GENERATORS.	1	D-8 DOZER	0.5
	NO	WELDING GENERATOR TIME.	
JUNE 22.		SAME AS 6/17 EXCEPT:	
	NO	WELDING GENERATOR TIME.	
JUNE 23.		SAME AS 6/17 EXCEPT:	
		WELDING GENERATOR	0.5

DATE:	NO.	EQUIPT.	HRS.
JUNE 24.	1	3/4 TON TRUCK	8.0
	2	AIR COMPRESSORS, 500 & 915 CM.	32.0
	2	ELECT. GENERATORS, 37.5 H.P.A.	32.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0
	3	SWEDISH DRILLS	48.0
	1	D-8 DOZER	0.5
JUNE 25.		SAME AS 6/24 EXCEPT:	
	1	D-8 DOZER	4.0
	1	FAIRBANKS-MORSE WATER PUMP	16.0
JUNE 26.		SAME AS 6/25 EXCEPT.	
	NO	DOZER TIME.	
JUNE 27.	2	ELECT. GENERATORS	32.0
	1	BLOWER	8.0
JUNE 29.		SAME AS 6/24 EXCEPT:	
	NO	DOZER TIME.	
	1	WATER PUMP	16.0
	1	WELDING GENERATOR	1.0

DOZED DOWN ENTRANCE ROAD.

DOZED DOWN MUCK PILE.

USED TO PUMP WATER FROM SUMP FOR DRILLING.

INSPECTOR WORKING IN TUNNEL.

DATE:	NO.	EQUIPT.	HRS.
JUNE 30 <sup>th</sup> ST.	1	3/4 TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0
	1	WATER PUMP	16.0
	3	SWEDISH DRILLS	48.0
	1	WELDING GENERATOR	2.0
JULY 1.		SAME AS 6/30 EXCEPT:	
	1	WELDING GENERATOR	0.5
	1	WATER PUMP	10.0
JULY 2 <sup>ND</sup> .		SAME AS 6/30 EXCEPT:	
	NO	WATER PUMP AND	
	NO	WELDING GENERATOR AND	
	1	D-8 DOZER	1.5
JULY 3 <sup>RD</sup> .		SAME AS 6/30 EXCEPT:	
	NO	WATER PUMP AND	
	NO	WELDING GENERATOR.	

WELDING DRILL STEELS. - EXPERIMENTING.

INSUFFICIENT PRESSURE FOR DRILLING - CHANGED  
OVER FROM PUMP TO WATER TANK LINE AT 6 A.M.

DOZER USED TO PUSH TRUCK UP TO POWDER HOUSE.

DATE:	NO.	EQUIPT.	HRS.
JULY 6, 53	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0
	3	SWEDISH DRILLS	48.0
	1	WELDING GENERATOR	0.5
JULY 7, 53.		SAME AS 7/6 EXCEPT:	
STARTED USING SEEPAGE WATER IN HEADING AGAIN.	1	FAIRBANKS-MORSE WATER PUMP	16.0
	NO	WELDING GENERATOR TIME.	
JULY 8, 53.		SAME AS 7/7.	
" 9,		" " "	
" 10,		" " "	
USED BY INSPECTOR, TAKING X-SECTIONS.	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	8.0
" 13.		SAME AS 7/7 EXCEPT:	
USED BY NITE MECH. ON REPAIR WORK.	1	WELDING GENERATOR	1.5



REPAIRING CUT DOWN MUCK CAR, TOP.  
DOZED DOWN THE SPOIL PILE.

CLEARED BRUSH OFF AROUND LIGHT PLANT ON HILL.

WELDING SPARK ARRESTERS FOR MOTORS.

DATE:	No.	EQUIPT.	Hrs.
JULY 14, '53.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	2	SLUDGE PUMPS	32.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	3	SWEDISH DRILLS	48.0
	1	WATER PUMP	16.0
	1	WELDING GENERATOR	9.0
	1	D-8 DOZER	1.5
JULY 15, '53.		SAME AS 7/14 EXCEPT:	
	NO	WELDING GENERATOR TIME	
	1	D-8 DOZER	2.0
JULY 16.		SAME AS 7/14 EXCEPT.	
	1	WELDING GENERATOR	2.0
	NO	DOZER TIME.	
JULY 17.		SAME AS 7/14 EXCEPT;	
	NO	WELDING GENERATOR TIME	
	NO	DOZER TIME.	

CREW WORKED IN TUNNEL DIGGING DRAINAGE  
DITCH.

1 ELECT. GEN. LEFT RUNNING FRI. NITE.

AUXILIARY LIGHT PLANTS USED. ROGERS GENERATOR  
BEING REPAIRED.

ROGERS GENERATOR PUT BACK IN SERVICE AT 4 P.M.

DISCONTINUED USE OF 2 AUXILIARY GENERATORS AT 4 A.M.

DATE:	No.	EQUIPT.	HRS.
JULY 18, 53.	2	AIR COMPRESSORS	16.0
SATURDAY.	2	ELECT. GENERATORS	24.0
	1	AIR BLOWER	8.0
	1	AIR LOCOMOTIVE	8.0
	2	SLUDGE PUMPS	16.0
JULY 20.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	
	1	ELECT. GENERATOR 97.5 KVA.	16.0
	2	" " 7.5 KVA	32.0
	1	AIR BLOWER	16.0
	1	WATER PUMP	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	3	SWEDISH DRILLS	48.0
	2	SLUDGE PUMPS	<del>32.0</del> 16.0
JULY 21.		SAME AS 7/20 EXCEPT:	
	2	GENERATORS, 97.5 KVA	24.0
	2	" 7.5 KVA	16.0

	DATE:	No.	EQUIPT.	Hrs.
	JULY 22, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
		2	AIR COMPRESSORS	32.0
		2	ELECT. GENERATORS	32.0
		1	AIR BLOWER	16.0
		1	FAIRBANKS-MORSE PUMP	16.0
		1	MUCKING MACHINE	16.0
		2	AIR LOCOMOTIVES	32.0
		3	SWEDISH DRILLS	48.0
		2	SLUDGE PUMPS	32.0
	JULY 23		SAME AS 7/22, AND:	
DOZER USED TO LEVEL OFF MUCK PILE.		1	D-8 DOZER	5.0
	JULY 24.		SAME AS 7/22.	
USED BY CITY INSPECTOR TAKING X-SECTIONS.	" 25.	2	GENERATORS	32.0
		1	BLOWER	8.0
	" 27.		SAME AS 7/22 EXCEPT: AND	
DISCONTINUED USE OF ONE SLUDGE PUMP.		1	SLUDGE PUMP	16.0
A USED DOZER TO LIFT AIR TANK ONTO PIER FOR WATER TANK.		1	D-8 DOZER	1.0
	JULY 28.		SAME AS 7/22 EXCEPT:	
		1	SLUDGE PUMP	16.0

DATE:	No.	EQUIPT.	HRS.
JULY 29.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	1	WATER PUMP, F-M.	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	3	SWEDISH DRILLS	48.0
	1	SLUDGE PUMP	16.0
JULY 30		SAME AS 7/29. AND:	
	1	WELDING GENERATOR	0.5
JULY 31		SAME AS 7/29 AND:	
	1	WELDING GENERATOR	0.5
AUG. 1.	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	8.0
AUG. 3.		SAME AS 7/29 AND:	
	1	WELDING GENERATOR	2.0
	1	D-8 DOZER	2.5
AUG. 4.		SAME AS 7/29. EXCEPT:	
" 5.		SAME AS 7/29 EXCEPT:	
	2	SWEDISH DRILLS	32.0

USED BY CITY INSPECTOR WORKING IN TUNNEL.

WELDED NEW BOTTOM IN MUCKER DIPPER.

MUCKED DOWN SPOIL BANK WITH DOZER.

USING ONLY TWO DRILLS NOW, AS EXPERIMENT.

315 COMPRESSOR SHUT DOWN 2 HRS FOR SERVICING.

USED BY INSPECTOR IN TAKING X-SECTIONS.  
GENERATORS LEFT RUNNING FRI. NITE.

DOZED DOWN THE MUCK PILE AGAIN.

DATE:	NO.	EQUIPT.	HOURS
AUG. 6, 53.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	30.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	1	WATER PUMP F-MORSE	16.0
	1	SLUDGE PUMP	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	2	SWEDISH DRILLS	32.0
AUG. 7.		SAME AS 8/6 EXCEPT:	
	3	SWEDISH DRILLS	48.0
AUG. 8	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	8.0
AUG. 10.		SAME AS 8/7 AND:	
	1	WELDING GENERATOR	0.5
AUG. 11.		SAME AS 8/7 AND:	
	1	D-8 DOZER	2.5
AUG. 12.		SAME AS 8/7.	
AUG. 13.		SAME AS 8/7.	
AUG. 14.		SAME AS 8/7.	

USED BY CITY INSPECTOR WORKING IN TUNNEL.

DATE:	NO.	EQUIPT.	HOURS.
AUG. 15. '53	2	ELECT. GENERATORS	32.0
(SATURDAY)	1	BLOWER	8.0
AUG. 17.	1	$\frac{3}{4}$ TON TRUCK.	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	1	WATER PUMP, F.-MORSE.	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	3	SWEDISH DRILLS	48.0
	1	SLODGE PUMP	16.0
	1	WELDING GENERATOR	1.0
AUG. 18.		SAME AS 8/17 EXCEPT:	
	NO	WELDING GENERATOR. TIME.	
AUG. 19		SAME AS 8/17 EXCEPT	
	NO	WELDING GENERATOR TIME, AND	
	1	D-8 DOZER	4.5
AUG 20.		SAME AS 8/17 EXCEPT:	
	NO	WELDING GENERATOR TIME.	

USED DOZER ON MUCK PILE AGAIN TODAY.

	DATE:	NO.	EQUIPT.	HOURS
	AUG. 21.	1	3/4 TON TRUCK	8.0
		2	AIR COMPRESSORS	32.0
		2	ELECT. GENERATORS	32.0
		1	AIR BLOWER	16.0
		1	WATER PUMP	16.0
		1	MUCKING MACHINE	16.0
1 MOTOR LOST 2 HRS, OTHER LOST 2 HRS, BROKEN CHAINS.		2	AIR LOCOMOTIVES	27.0
		3	SWEDISH DRILLS	48.0
		1	SLUDGE PUMP	16.0
USED BY CITY INSPECTOR WORKING IN TUNNEL.	AUG. 22.	2	ELECT. GENERATORS	32.0
GENERATORS LEFT RUNNING FRIDAY NITE.	SAT.	1	AIR BLOWER	8.0
	AUG. 24.		SAME AS 8/21 EXCEPT:	
		2	AIR LOCOMOTIVES	32.0
	AUG. 25.		SAME AS 8/24.	
	AUG. 26.		SAME AS 8/24, AND:	
WELDING TOGETHER SHORT PIECES OF 3" ALUM. PIPE.		1	WELDING GENERATOR	1.0
" " " " " "	AUG. 27		SAME AS 8/24, AND:	
" " " " " "		1	WELDING GENERATOR	1.0
	AUG. 28.		SAME AS 8/24.	
	AUG. 29.		SAME AS 8/22.	

DATE:	NO.	EQUIPT.	HOURS.
AUG. 31, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
PUMP OUT OF ORDER - 4 HRS DELAY IN WORK.	1	WATER PUMP	12.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	3	SWEDISH DRILLS	48.0
	1	SLUDGE PUMP	16.0
DOZED DOWN MUCK PILE AGAIN TODAY.	1	D-8 DOZER	3.0
SEPT. 1.		SAME AS 8/31 EXCEPT:	
	1	WATER PUMP	16.0
	NO	DOZER TIME.	
*SEE MATERIAL BOOK FOR ELECT MOTOR REC'D.	SEPT. 2.	SAME AS 9/1. *	
	SEPT. 3	SAME AS 9/1.	
	SEPT. 4.	SAME AS 9/1, AND:	
WELDING ALUMINUM 3" PIPE SECTIONS.	1	WELDING GENERATOR	1.0
	SEPT. 8.	SAME AS 9/1.	
	SEPT. 9.	SAME AS 9/1.	



ONE F.-M. WATER PUMP INSTALLED AT PORTAL, PUMPING WATER BACK INTO TUNNEL; 8 HRS ON DAY SHIFT ONLY.

DOZER USED TO REMOVE BUCKETS FROM TWO MUCK CARS.

DISCONTINUED USE OF PUMP AT PORTAL. LINE LEAKS TOO MUCH TO GET WATER INTO CAR SIDING AREA.

DOZER USED AT NORTH PORTAL ON NEW WORK ROAD.

1 PUMP USED 12 HRS. 1 PUMP USED 4 HRS.

DOZER USED AT N. PORTAL ON NEW ROAD.

DATE:	NO.	EQUIPT.	HOURS.
SEPT. 10, '33	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	2	WATER PUMPS	24.0
	1	SLUDGE PUMP	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	3	SWEDISH DRILLS	48.0
	1	D-8 DOZER	1.0
SEPT. 11.		SAME AS 9/10 EXCEPT:	
	1	WATER PUMP	16.0
	NO	DOZER TIME.	
SEPT. 14.		SAME AS 9/10 EXCEPT:	
	1	WATER PUMP	16.0
	1	D-8 DOZER	8.0
SEPT. 15.		SAME AS 9/10 EXCEPT:	
	2	WATER PUMPS.	16.0
	1	D-8 DOZER	8.0

1 PUMP BEING REPAIRED 2 HRS. BOTH IN USE AT  
10 A.M. UNTIL MIDNIGHT, HOINED IN TANDEM TO PIPE.

DOZER WORK FINISHED AT H. PORTAL WORK ROAD.

STARTED A HOLE IN GULLY BELOW 36" DRAIN PIPE FOR  
5,000 GAL. WATER TANK. DOZER STUCK IN MUD-HOWORK.

DATE:	NO.	EQUIPT.	HOURS.
SEPT. 16, 53	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	2	WATER PUMPS	30.0
	1	SLUDGE PUMP	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	3	SWEDISH DRILLS	48.0
	1	D-8 DOZER	8.0
	1	WELDING GENERATOR	1.0
SEPT. 17.		SAME AS 9/16 EXCEPT:	
	2	WATER PUMPS	32.0
	1	D-8 DOZER	1.0
	NO	WELDING GENERATOR TIME.	

SWING SHIFT MEN WALKED OFF JOB AT  
6 A.M. DUE TO LACK OF AIR IN TUNNEL.  
GENERATORS & BLOWER LEFT RUNNING ALL  
NITE.

DOZER USED TO DIG A SUMP IN GULLY BELOW

36" DRAIN LINE FOR PLACING WATER TANK IN.

SUPT. & SHIFTER WORKING IN TUNNEL CLEANING

OUT VENT PIPE. INSPECTOR WORKED 2 HRS. IN TUNNEL.

DATE:	NO.	FOR EQUIP.	HRS.
SEPT. 18.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	20.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	2	WATER PUMPS	20.0
	1	MUCKING MACHINE	10.0
	2	AIR LOCOMOTIVES	20.0
	3	SWEDISH DRILLS	30.0
	1	SLUDGE PUMP	10.0
	1	D-8 DOZER	3.0
SEPT. 19.	2	ELECT. GENERATORS	32.0
SATURDAY.	1	AIR BLOWER	16.0
SEPT. 21.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	2	WATER PUMPS	32.0
	1	AIR BLOWER	16.0
	1	SLUDGE PUMP	16.0
	1	MUCKING MACHINE	16.0

DATE:	NO.	EQUIPT.	HRS.
SEPT. 21	2	AIR LOCOMOTIVES	32.0
CONT'D.	3	SWEDISH DRILLS	48.0
	1	WELDING GENERATOR	1.0
SEPT. 22.		SAME AS 9/21 EXCEPT:	
	1	WELDING GENERATOR	2.0
SEPT. 23.		SAME AS 9/21 EXCEPT:	
	NO	WELDING GENERATOR TIME.	
SEPT. 24.		SAME AS 9/21 EXCEPT:	
	NO	WELDING GENERATOR TIME, AND	
	1	D-8 DOZER	2.0
SEPT. 25		SAME AS 9/21 EXCEPT:	
	2	WATER PUMPS, SMALL	16.0
	1	" " , LARGE	8.0
	NO	WELDING GENERATOR TIME	
	1	D-8 DOZER	1.0
SEPT. 26	2	ELECT. GENERATORS	32.0
SATURDAY.	1	BLOWER	8.0

SEE FOLLOWING PAGE FOR ITEMS RECEIVED TODAY.

MOVED 5,000 GAL. TANK FROM ROAD INTO GULLY.

TWO SMALL F-M WATER PUMPS DISCONNECTED 4 P.M.

LARGE PNEUMATIC PISTON PUMP HOOKED UP 4 P.M.

DOZER USED TO MOVE 5,000 GAL. TANK IN GULLY.

INSPECTOR TAKING X-SECTIONS IN TUNNEL.

ITEMS DELIVERED BY SHEA CO. <sup>PICKUP</sup> TRUCK.

ELECT. SWITCH SERIES NO. 370127, 220 VOLTS,  
3 PHASE, 60 CYCLE, PURCHASED FROM M.W. MARTIN  
ELECT. CO. INV. # 6648. TOTAL COST: \$61.80  
TO BE USED IN TUNNEL FOR WATER

NEW EQUIPMENT SHIPPED FROM MINE AND  
7 MILL MACH. CO. IN LOS ANGELES. DELIVERED  
BY SHEA CO. TRUCK.

\* 3 BLOCKS LISTED ON SHIPMENT ORDER BUT  
NOT RECEIVED AT THIS JOB TODAY.

THIS EQUIPMENT TO BE USED FOR CLEANING  
BOTTOM OF TUNNEL.

SEPT. 24.

PAID IN

DEC. '53 ESTIMATE.

SEPT. 29.

USED EQUIPMENT:

1	ELECT PUMP, SINGLE, FAIRBANKS-MORSE #292259.	REC'D.
1	ELECT. PUMP, DOUBLE, FAIRBANKS-MORSE #292263.	REC'D
1	COMBINATION ELECT. BREAKER-STARTER SWITCH, 220 VOLTS (CIRCUIT BREAKER 250 VOLTS, 50 AMPS) MAGNETIC.	REC'D.
1	PISTON PUMP, PNEUMATIC, SER. # 50105.	REC'D

NEW EQUIPMENT: REC'D.

1	JOB TURBINAIR SLUSHER HOIST, MODEL S-211, SERIAL # 5596, COST: \$1,080.00	REC'D.
1	26" PACIFIC SLUSHER SCRAPER, MODEL A-26 B-2536 # 205.00	REC'D.
6	1 1/2" X 10" PAC. SHAVE ANCHORS.	\$ 38.70
10	5/16" CROSBY CABLE CLAMPS.	3.50
300 L. F.	5/16" WIRE ROPE	37.50
3*	6" SKODUM SLUSHER BLOCKS.	89.10
	TOTAL COST:	1,497.41

DATE:	NO.	EQUIPT.	HOURS.
SEPT. 28:	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	1	WATER PUMP	16.0
	1	MUCKING MACHINE	16.0
	2	AIR LOCOMOTIVES	32.0
	3	SWEDISH DRILLS	48.0
	2	SLUDGE PUMPS	32.0
	1	D-8 DOZER	1.0
	1	WELDING GENERATOR	1.0
SEPT. 29.		SAME AS 9/28 EXCEPT:	
	NO	DOZER TIME.	
SEPT. 30.		SAME AS 9/28 EXCEPT:	
	NO	DOZER TIME.	
	1	WELDING GENERATOR	3.0
OCT. 1.		SAME AS 9/28 EXCEPT:	
	NO	DOZER OR WELDER TIME.	
OCT. 2.		SAME AS 9/28 EXCEPT	
	NO	DOZER OR WELDER TIME.	

NOTE: 1 SMALL FAIRBANKS-MORSE PUMP LOANED  
TO HARRY FOSTER TODAY TO PUMP OUT DITCH.

FOSTER RETURNED PUMP TONITE.

ROGERS GENERATOR BURNED OUT A BRUSH,  
REPAIRED AND BACK IN SERVICE WITHIN 30 MINUTES.

ONE GENERATOR RAN ALL NITE; INSPECTOR  
 WORKING IN TUNNEL UNTIL 11 P.M., USED ONE  
 GENERATOR ONLY.

DATE:	No.	EQUIPT.	HRS.
OCT. 5.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	16.0
	2	ELECT. GENERATORS	<del>24.0</del> 22.0
	1	AIR BLOWER	8.0
	1	SLUDGE PUMP	8.0
	1	WATER PUMP, LARGE	8.0
	1	MUCKING MACHINE	4.0
	1	SLUSHER	4.0
	2	AIR LOCOMOTIVES	16.0
	OCT. 6.	1	$\frac{3}{4}$ TON TRUCK
2		AIR COMPRESSORS	16.0
2		ELECT. GENERATORS.	16.0
1		AIR BLOWER	8.0
1		SLUDGE PUMP	8.0
1		WATER PUMP, PISTON	8.0
1		MUCKING MACHINE	4.0
1		SLUSHER	4.0
2		AIR LOCOMOTIVES	16.0
1		SWEDISH DRILL	8.0
OCT. 7.		SAME AS OCT. 6, AND:	
	1	WELDING GENERATOR	1.0

DATE:	No.	EQUIPMENT:	Hrs.
Oct. 8, '53	1	3/4 TON TRUCK	8.0
	2	AIR COMPRESSORS	16.0
	2	ELECT. GENERATORS	16.0
	1	AIR BLOWER	8.0
	1	SLUDGE PUMP	8.0
	1	WATER PUMP, PISTON	8.0
	1	SWEDISH DRILL	8.0
	1	MUCKING MACHINE	4.0
	1	SLUSHER	4.0
	2	AIR LOCOMOTIVES	16.0
	1	WELDING GENERATOR	2.5
Oct. 9		SAME AS 10/8 EXCEPT:	
	No	WELDING GENERATOR TIME.	
Oct. 12.		SAME AS 10/8 EXCEPT:	
	1	WELDING GENERATOR	1.0
	1	D-8 DOZER	3.0
Oct. 13.		SAME AS 10/8 EXCEPT:	
	No	WELDING GENERATOR TIME	
	1	D-8 DOZER	6.0
	No	AIR BLOWER - TOO COLD.	

DOZED DOWN MUCK PILE.

GRADING AND PLACING TUNNEL MUCK IN APPROACH  
CUT SOUTH OF 36" DRAIN PIPE ANGLE POINT.



DATE:	No.	EQUIPT.	HRS.
OCT. 14, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	16.0
	2	ELECT. GENERATORS	16.0
	1	AIR BLOWER	8.0
	1	SLUDGE PUMP	8.0
	1	WATER PUMP, PISTON	8.0
	1	MUCKING MACHINE	4.0
	1	SLUSHER	4.0
	1	SWEDISH DRILL	8.0
	2	AIR LOCOMOTIVES	16.0
OCT. 15.		SAME AS 10/14 EXCEPT:	
	2	SWEDISH DRILLS	16.0
	1	ELECT. WATER PUMP	6.0
		SAME AS 10/14 EXCEPT:	
	2	SWEDISH DRILLS.	16.0
	No	PISTON WATER PUMP TIME.	
	1	ELECT. WATER PUMP	8.0
OCT. 19.		SAME AS 10/14 EXCEPT	
	2	SWEDISH DRILLS	16.0

STARTED USING ELECT. DRIVEN PUMP TO INCREASE  
VOLUME OF WATER IN HEADING FROM STORAGE TANK.

DISCONTINUED USE OF AIR DRIVEN WATER PUMP IN TUNNEL.

	DATE:	NO.	EQUIPT.	HOURS.
	OCT. 20, '53.	1	$\frac{3}{4}$ TON TRUCK	8.0
		2	AIR COMPRESSORS	16.0
MOVED ONE SMALL 7.5 KVA GENERATOR TO THE NORTH PORTAL TODAY FOR LIGHTS IN NORTH END.		2	ELECT. GENERATORS	16.0
		1	AIR BLOWER	8.0
		1	ELECT. WATER PUMP	8.0
		1	MUCKING MACHINE	4.0
		1	SLUSHER	4.0
		2	AIR LOCOMOTIVES	16.0
TRIMMING TIGHT SPOTS IN TYPE "R" SECTION.		2	SWEDISH DRILLS	16.0
		1	SLUDGE PUMP	8.0
	OCT. 21, '53		SAME AS ABOVE EXCEPT:	
USED SMALL GENERATOR FOR LIGHTS AT N. END.		1	ELECT. GENERATOR, 7.5KVA	8.0
TRIMMING & DRILLING PIN HOLES TO HANG RAILS ON.		1	SWEDISH DRILL IN USE.	8.0
	OCT. 22, '53		SAME AS OCT. 21.	
	" 23.		" " " "	
	" 26.		" " " " AND,	
MOVED TRACKS ON DUMP WITH DOZER.		1	D-8 DOZER	1.0
	" 27.		SAME AS OCT. 21.	
	" 28.		" " " " AND:	
		1	WELDING GENERATOR	1.0

2 - 37.5 KVA; AND 1 - 7.5 KVA USED.

USING PUMPS TO PUMP WATER OUT OF HOLES IN  
SECTION ALREADY CLEANED UP.

DOZER TIME PAID THAN OCT. BY OCT. ESTIMATE.

RESUMED TWO-SHIFT OPERATIONS TODAY.

7.5 KVA GENERATOR USED ON DRY SHIFT ONLY.

DATE;	No.	EQUIPT.	HOURS.
OCT. 29, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	16.0
	3	ELECT. GENERATORS	24.0
	1	ELECT. WATER PUMP.	8.0
	1	MUCKING MACHINE	4.0
	1	SLUSHER.	4.0
	2	AIR LOCOMOTIVES	16.0
	2	SLUDGE PUMPS	16.0
	1	SWEDISH DRILL	8.0
OCT. 30.		SAME AS OCT. 29TH.	
NOV. 2.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	3	ELECT. GENERATORS	40.0
	1	AIR BLOWER	16.0
	1	ELECT. WATER PUMP	16.0
	1	MUCKING MACHINE	4.0
	1	SLUSHER	12.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0

\* SMALL 7.5 KVA GENERATOR USED ON DAY SHIFT ONLY.

MECH. DOZED DOWN THE TOP OF THE DUMP TODAY.

A DISCHARGE WATER LINE WAS INSTALLED TODAY TO THE NORTH PORTAL FOR CONTINUOUS PUMPING OUT.

USING PISTON PUMP FOR WATER REMOVAL TO N. PORTAL.

DIAPHRAM PUMP USED INTERMITTANTLY TO KEEP WATER LEVEL DOWN IN IMMEDIATE WORK AREA. PISTON PUMP USED IN CLEANED PORTION OF TUNNEL.

DATE:	NO.	EQUIPT.	HOURS.
NOV. 3, '53	1	<sup>3</sup> / <sub>4</sub> TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	3	ELECT. GENERATORS	40.0*
	1	AIR BLOWER	16.0
	1	ELECT. WATER PUMP	16.0
	1	MUCKING MACHINE	3.0
	1	SLUSHER	13.0
	2	AIR LOCOMOTIVES	32.0
	1	D-8 DOZER	1.0
NOV. 4, '53		SAME AS 11/3 EXCEPT:	
	1	MUCKING MACHINE	4.0
	1	SLUSHER	12.0
	2	SLUDGE PUMPS	32.0
	NO	DOZER TIME.	
NOV. 5,		SAME AS 11/4 EXCEPT:	
	1	PISTON SLUDGE PUMP	16.0
NOV. 6,		SAME AS 11/5. AND,	
	1	DIAPHRAM SLUDGE PUMP	4.0

## REMARKS:

SUPT. ON JOB WITH TRUCK FROM 1 P.M. TO 5 P.M. ONLY.

SMALL GENERATOR AT N. PORTAL NOT USED TODAY.

500 COMPRESSOR OUT OF ORDER UNTIL NOON.

DATE:	NO.	EQUIPMENT:	HOURS.
Nov. 9, '59	1	$\frac{3}{4}$ TON TRUCK.	4.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	BLOWER	16.0
	2	LOCOMOTIVES	32.0
	1	MUCKING MACHINE	4.0
	1	SLUSHER	12.0
	1	ELECT. WATER PUMP	16.0
	2	SLUDGE PUMPS	32.0
	Nov. 10.		SAME AS NOV. 9 EXCEPT:
	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	D-8 DOZER	1.0
	1	SLUDGE PUMP, PISTON	16.0
Nov. 12.		SAME AS NOV. 9 EXCEPT.	
	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	28.0
	1	MUCKING MACHINE	3.0
	1	SLUSHER	13.0
	1	D-8 DOZER	1.0
Nov. 13.		SAME AS NOV. 9. EXCEPT.	
	1	$\frac{3}{4}$ TON TRUCK	8.0
	1	WELDING GENERATOR	1.0

DATE:	NO.	EQUIPT.	HOURS.
Nov. 16, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR BLOWER	16.0
	2	AIR LOCOMOTIVES	32.0
	1	MUCKING MACHINE	3.5
	1	SLUSHER	12.5
	1	WATER PUMP, ELGCT.	16.0
	2	SLUDGE PUMPS	32.0
Nov. 17.		SAME AS 11/16 EXCEPT:	
	1	MUCKER	4.0
	1	SLUSHER	12.0
	3	SLUDGE PUMPS	48.0
	1	D-8 DOZER	0.5
	1	WELDING GENERATOR	1.0
Nov. 18.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	3	ELECT. GENERATORS	46.5
	2	AIR LOCOMOTIVES	32.0

PUMPING OUT N. END OF TUNNEL.

DOZER USED TO RETRIEVE MUCK CARS FROM PUMP.

SMALL 7.5 KVA GENERATOR USED AT N. PORTAL ON DAY SHIFT.

DISCONTINUED USE OF CENTRIFUGAL PUMP AT NOON.

STARTED USING LARGE PISTON PUMP FOR WATER.

7.5 GENERATOR USED AT N. PORTAL ON DAY SHIFT ONLY.

PUMPING WATER OUT OF N. END.

DATE:	No.	EQUIPT.	Hrs.
Nov. 18	1	MUCKING MACHINE	3.0
CONTO.	1	SLUSHER	13.0
	1	ELECT. WATER PUMP	4.0
	1	AIR " "	12.0
	2	SLUDGE PUMPS	32.0
	1	D-8 DOZER	1.0
	1	WELDING GENERATOR	1.0
Nov. 19.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	3	ELECT. GENERATORS	40.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	3.5
	1	SLUSHER	12.5
	2	LOCOMOTIVES	32.0
	5	WATER SLUDGE PUMPS	80.0
Nov. 20.		SAME AS NOV. 19, EXCEPT.	
		BLOWER NOT USED TODAY.	
	1	MUCKING MACHINE	4.0
	1	SLUSHER	12.0

DAY SHIFT SPENT 4 HRS. MOVING RAILS OUT OF N.  
 END OF TUNNEL.  
 STARTED DRILLING CONCRETE HOLES IN N. END.

DRILLING CONCRETE HOLES, N. END, BOTH SHIFTS.  
 PUMPING OUT N. END, OTHER PUMPS NOT USED.

NOV.	NO.	EQUIPT	HRS.
NOV. 23, '33	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	3	ELECT. GENERATORS	40.0
	1	AIR BLOWER	16.0
	1	MUCKING MACHINE	3.0
	1	SLUSHER	9.0
	2	AIR LOCOMOTIVES	24.0
	1	ROCK DRILL	8.0
	5	SLUDGE PUMPS	80.0
NOV. 24.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	3	ELECT. GENERATORS	40.0
		BLOWER NOT USED TODAY.	
	1	MUCKING MACHINE	3.0
	1	SLUSHER	13.0
	2	ROCK DRILLS	32.0
2	SLUDGE PUMPS	32.0	



DELIVERED BY PENNEROHM.

DATE.	No.	EQUIPT.	HRS.
NOV. 25.	1	ELECT. SLUDGE PUMP, NEW, NO SERIAL NUMBER, FAIRBANKS-MORSE. MODEL S124XBE, FR. 5632. H.P. $\frac{1}{2}$ ; VOLTS 115; AMPS 4.6 RPM 1725; PHASE 1; CYCLE PUMP NO. B-1810-B; F. 17.49-B	REC'D 60 F.H.
NOV. 25.	1	$\frac{3}{4}$ TON TRUCK.	8.0
	2	AIR COMPRESSORS	32.0
	3	ELECT. GENERATORS	40.0
	1	AIR BLOWER	16.0
	2	WATER SLUDGE PUMPS	32.0
	1	MUCKING MACHINE	3.0
	1	SLUSHER.	13.0
	2	LOCOMOTIVES	32.0
NOV. 26		THANKSGIVING HOLIDAY.	
" 27.		SAME AS NOV. 25, AND	
	1	ELECT. SLUDGE PUMP	8.0
	1	D-8 DOZER	0.5'

PUMPING OUT HOLES IN N. END. PUMP DOES NOT  
WORK TOO WELL - CLOGS UP AND STOPS.  
DOZER USED ON DUMP TO MOVE TRACKS.

WATER PRESSURE FOR WASHING DOWN SIDES.

DOZER USED TO PULL A STEEL TRUCK OUT OF DITCH.

PUMPING OUT HOLES AT N. END.

PUMPING WATER OUT OF CENTER OF TUNNEL.

PUMPING OUT HOLES AT N. END, REINFORCED SECT.

DATE:	No.	EQUIPT.	HRS.
Nov. 30, '35	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	3	ELECT. GENERATORS	40.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	3.0
	1	SLUSHER	13.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0
	1	ELECT. WATER PUMP	4.0
	1	D-8 DOZER	0.5
Dec. 1.		SAME AS NOV. 30 EXCEPT: NO D-8 DOZER TIME.	
	1	ELECT. SUMP PUMP	8.0
	1	MUCKING MACHINE	2.0
	1	SLUSHER	14.0
	1	LARGE PISTON PUMP	4.0
Dec. 2.		SAME AS 11-30 EXCEPT: NO D-8 DOZER TIME.	
	3	SLUDGE PUMPS	40.0
	1	ELECT. SUMP PUMP	8.0

USED FOR LIGHTS AT N. END REINFORCED SECTION.

1 PUMP AT N. END USED ONLY BY DAY SHIFT.

PUMPING OUT HOLES AT N. END.

WATER PRESSURE FOR WASHING DOWN SIDES.

ROCK DRILL USED TO TRIM TIGHT SPOTS BEHIND  
STEEL AT N. END.

DATE:	NO.	EQUIPT.	HRS.
DEC. 3, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AUX. ELECT. "	8.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	2.5
	1	SLUSHER	13.5
	2	AIR LOCOMOTIVES	32.0
	3	SLUDGE PUMPS	40.0
	1	ELECT. SUMP PUMP	8.0
	1	" WATER "	8.0
DEC. 4.		SAME AS 12-3 EXCEPT:	
	NO	BLOWER USE TODAY. TOO COLD.	
	NO	ELECT SUMP PUMP.	
	NO	" WATER PUMP.	
	2	SLUDGE PUMPS	32.0
	1	MUCKING MACHINE	2.0
	1	SLUSHER	14.0
	1	ROCK DRILL (I.-P.)	8.0

	DATE:	NO.	EQUIPT.	HRS.
	DEC. 7. '53	1	$\frac{3}{4}$ TON TRUCK	8.0
		2	AIR COMPRESSORS	32.0
		2	ELECT. GENERATORS	32.0
		2	SLUDGE PUMPS	32.0
		1	MUCKING MACHINE	2.5
		1	SLUSHER	13.5
WATER PRESSURE FOR WASHING DOWN SIDES.		1	LARGE PISTON PUMP	4.0
LEVELED OFF TOP OF DUMP FOR WORK YARD.		1	D-8 DOZER	2.5
	DEC. 8.	1	$\frac{3}{4}$ TON TRUCK	8.0
		2	AIR COMPRESSORS	32.0
AUX. ELECT. PLANT USED AT N. END TODAY.		3	ELECT. GENERATORS	40.0
		1	BLOWER	16.0
		1	MUCKING MACHINE	2.0
SLUSHER BROKE DOWN 6 AM. WITH BURNED OUT BEARING.		1	SLUSHER	5.0
		2	AIR LOCOMOTIVES	32.0
DRILLING PLUG HOLES IN TIGHT SPOTS AT S. END.		1	SWEDISH DRILL	9.0
KNOCKING OFF TIGHT POINTS BEHIND STEEL AT N. END.		1	JACK HAMMER	4.0
		2	SLUDGE PUMPS	32.0
PRESSURE FOR WASHING DOWN SIDES.		1	LARGE PISTON PUMP	8.0

AUX. ELECT. PLANT USED AT N. PORTAL TODAY.

SLUSHER BROKE DOWN 4 HRS. UNTIL NOON.

PLUGGING TIGHT SPOTS AT S. END FOR TRIMMING.

PLANT AT N. PORTAL NOT USED TODAY.

SLUSHER BROKE DOWN AGAIN. OUT OF ORDER 3 HRS.

USED TO CUT DRAINAGE CHANNELS THRU HIGH SPOTS.

DATE:	NO.	EQUIPT.	HRS.
DEC. 9, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	3	ELECT. GENERATORS	40.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	2.5
	1	SLUSHER	9.5
	1	SWEDISH DRILL.	4.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0
DEC. 10.		SAME AS 12-9 EXCEPT.	
	2	ELECT. GENERATORS	32.0
	1	MUCKING MACHINE	2.0
	1	SLUSHER	11.0
	1	ROCK DRILL, (I. R.)	2.0
DEC. 11.	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	1.0
	1	SLUSHER	15.0
	2	AIR LOCOMOTIVES	32.0
	2	SLUDGE PUMPS	32.0

DATE:	No.	EQUIPT.	HRS.
DEC. 14, '53	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	BLOWER	16.0
	1	MUCKING MACHINE	18.0
	1	SLUSHER	3.0
	2	SLUDGE PUMPS	32.0
DEC. 15, '53	SAME AS 12-14 EXCEPT:		
	1	BLOWER	8.0
	1	MUCKING MACHINE	3.0
DEC. 16, '53	1	SLUSHER	18.0
	1	$\frac{3}{4}$ TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0 40.0 <del>32.0</del>
	2	ELECT. GENERATORS	32.0
	2	SLUDGE PUMPS	32.0
	2	AIR LOCOMOTIVES	32.0
	1	D-8 DOZER	1.0
	1	SWEDISH DRILL	16.0
DEC. 17.	SAME AS 12-16 EXCEPT:		
	NO	SWEDISH DRILL TIME.	
	NO	DOZER TIME.	

SMALL GEN. IN USE AT N. PORTAL FOR LIGHTING.

DRILLING PLOG HOLES IN TIGHT POINTS IN  
S. REINFORCED SECTION.

SMALL GEN. AT N. PORTAL USED ON DAY SHIFT ONLY.

WORKING ONE SHIFT, ONLY, STARTING TODAY.

500 COMPRESSOR SHOT DOWN, UNDER REPAIR.

NOTE: CASE CO. EQUIPT. WILL BE LISTED IN

GUNITE DATA BOOK.

DOZER USED BY CASE CO. TO UNLOAD <sup>HEAVY EQUIPMENT.</sup> AND MOVE

USING LARGE PISTON PUMP FOR WATER SUPPLY FOR GUNITE.

AND 1 SLUDGE PUMP TO REMOVE WATER FROM N. END.

PLANT SHUT DOWN AT 4 P.M. TODAY - X'MAS EVE.

DATE:	NO.	EQUIPT.	HRS.
DEC. 18. 53	1	3/4 TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	3	ELECT. GENERATORS	40.0
	2	AIR LOCOMOTIVES	32.0
	1	D-8 DOZER	0.5
	2	SLUDGE PUMPS	32.0
DEC. 21.	1	3/4 TON TRUCK	8.0
	1	AIR COMPRESSOR	8.0
	3	ELECT. GENERATORS	24.0
	2	WATER PUMPS	16.0
	1	AIR LOCOMOTIVE	8.0
	1	D-8 DOZER	1.0
DEC. 22.		SAME AS 12/21 EXCEPT:	
	1	DOZER <del>TYPE</del> D-8	1.0
DEC. 23.		SAME AS 12/21 EXCEPT:	
	NO	DOZER TIME.	
DEC. 24.		SAME AS 12/21 EXCEPT:	
	1	DOZER, D-8.	1.0

NOTE: SEE GUNITE DATA BOOK FOR CASE CO. EQUIPT.

1 COMPRESSOR USED FORENOON, ONLY.

LARGE PUMP USED FOR GUNITE SUPPLY. 3 PUMPS REMOVING <sup>WATER.</sup>

LARGE PUMP USED FOR WATER SUPPLY TO GUNITE WORK.

SLUDGE PUMPS USED TO REMOVE WATER FROM FLOOR IN NORTH HALF OF TUNNEL, PUMPING TO S. END.

DRILLING HOLES FOR WEEPER VALVE NIPPLES.

DATE:	NO.	EQUIPT.	HRS.
DEC. 28, '33	1	3/4 TON TRUCK	8.0
	1	AIR LOCOMOTIVE	8.0
	2	AIR COMPRESSORS	12.0
	3	ELECT. GENERATORS	24.0
	4	WATER PUMPS	32.0
DEC. 29, '33		SAME AS ABOVE EXCEPT:	
	1	LARGE PISTON WATER PUMP	8.0
	4	SLUDGE PUMPS	32.0
	2	AIR COMPRESSORS	16.0
DEC. 30.		SAME AS 12/29.	
DEC. 31.		" " " AND	
	1	SWEDISH ROCK DRILL	4.0
JAN 4, '34	1	3/4 TON TRUCK	8.0
	2	AIR COMPRESSORS	16.0
	3	ELECT. GENERATORS	24.0
	1	AIR LOCOMOTIVE	8.0
	6	WATER PUMPS	48.0



DOZER USED BY F.W. CASE CO. MEN TO MOVE EQUIPT.  
CASE CO. MOVED NEW COMPRESSOR IN AND HOOKED  
INTO LINE AT S. PORTAL TO GET MORE AIR VOLUME.

DRILLING PLUG HOLES IN S. END FOR TRIMMING.  
CONTINUED USING CASE CO. COMPRESSOR AT S. END.

SHER CO. MOVED IN A 365 COMPRESSOR AND USED  
IT ALL DAY. CASE CO.'S 365 COMPRESSOR NOT  
USED TODAY - DISCONNECTED FROM LINE AT 8 A.M.  
CONT'D DRILLING PLUG HOLES IN S. END FOR TRIMMING.

DATE:	NO.	EQUIPMENT:	HRS.
JAN. 5, '54	1	3/4 TON TRUCK	8.0
	2	AIR COMPRESSORS	16.0
	3	ELECT. GENERATORS	24.0
	1	AIR LOCOMOTIVE	8.0
	6	WATER PUMPS IN USE.	48.0
JAN. 6.		SAME AS 1-5-54. AND:	
	1	D-8 DOZER	1.0
	1	365 COMPRESSOR - RECVD.	8.0
JAN 7.		SAME AS 1-5, EXCEPT:	
	4	WATER PUMPS IN USE	32.0
	1	SWEDISH DRILL	8.0
	1	365 COMPRESSOR - CASE'S.	8.0
JAN 8.		SAME AS 1-5, EXCEPT:	
	3	AIR COMPRESSORS	24.0
	4	WATER PUMPS - AIR DRIVEN	32.0
	1	ELECT. SUMP PUMP	1.0
	1	SWEDISH DRILL	8.0

WORKING AT N. END PLACING GUNITE.  
SHEA CO. MINERS LOADED ABOUT 200 PLUG HOLES  
IN S. END AND FIRED SAME AT 12:30 P.M.

NOTE: WENT ON TWO-SHIFT OPERATION AGAIN TODAY.

1-LOCO. HAULING MATERIAL IN -16.0 HRS.  
1-LOCO. USED ON DAY SHIFT REMOVING MUCK, S. END  
DRILLING PLUGS IN HIGH SPOTS IN BOTTOM.

CONTINUED DRILLING HIGH SPOTS IN BOTTOM TODAY.  
ONLY ONE PUMP IN USE ON NITE SHIFT, OTHERS  
OUT OF ORDER OR PLUGGED UP WITH MUD.

CUTTING CUT-OFF COLLARS AT S. END.

PLANT AT N. PORTAL NOT USED TODAY - RAIN.

DATE:	No.	EQUIPT.	HRS.
JAN. 9, '54	1	$\frac{3}{4}$ TON TRUCK	8.0
SATURDAY.	3	ELECT. GENERATORS	24.0
	1	AIR BLOWER	4.0
JAN. 11, '54	1	$\frac{3}{4}$ TON TRUCK	8.0
	3	AIR COMPRESSORS	48.0
	3	ELECT. GENERATORS	48.0
	1	AIR LOCOMOTIVE	16.0
	5	WATER PUMPS	72.0
JAN. 12, '54		SAME AS JAN. 11 EXCEPT:	
	2	AIR LOCOMOTIVES	24.0
	1	SWEDISH DRILL	8.0
JAN. 13, '54		SAME AS JAN. 12TH.	
" 14, '54		SAME AS JAN. 11, EXCEPT:	
	3	WATER PUMPS	32.0
	2	ROCK DRILLS-SWEDISH	16.0
JAN. 15.		SAME AS JAN. 11, AND	
	2	ROCK SPADES.	16.0
JAN. 18.		SAME AS JAN. 11, EXCEPT:	
	2	ELECT. GENERATORS	32.0
	4	WATER PUMPS	48.0
	2	ROCK DRILLS	16.0

ONLY 1 COMPRESSOR IN USE TONITE - NO WORK.  
 PLANT AT N. PORTAL NOT USED TODAY - NO WORK.  
 NOT USED BY NITE SHIFT - NO WORK.

DATE:	NO.	EQUIPMENT.	HRS.
JAN. 19, '54	1	3/4 TON TRUCK	8.0
	3	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR LOCOMOTIVE	8.0
	3	WATER PUMPS	40.0
	1	ROCK DRILL	8.0

ONLY 1 COMPRESSOR IN USE ON DAY SHIFT.  
 PLANT AT N. PORTAL NOT USED TODAY - NO WORK.

JAN. 20, '54	1	3/4 TON TRUCK	8.0
	3	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	AIR LOCOMOTIVE	16.0
	1	SWEDISH ROCK DRILL	8.0
	1	LARGE WATER PUMP	7.0
	3	WATER SLUDGE PUMPS	48.0

CASE CO. REMOVING REBOUND OUT N. PORTAL.  
 PLANT AT N. PORTAL USED 8 HRS TODAY. - SHERCO  
 DRILLED GROUT HOLES AT N. END TODAY.

JAN. 21.	1	3/4 TON TRUCK	8.0
	3	AIR COMPRESSORS	48.0
	3	ELECT. GENERATORS	40.0
	1	SWEDISH DRILL	8.0
	1	AIR LOCOMOTIVE	16.0
	4	WATER PUMPS	64.0
	1	WELDING GENERATOR	1.0

	DATE:	No.	EQUIPMENT:	HRS.
	JAN. 22, '64	1	$\frac{3}{4}$ TON TRUCK	8.0
		3	AIR COMPRESSORS	48.0
		3	ELECT. GENERATORS	40.0
		1	AIR LOCOMOTIVE	16.0
		2	ROCK DRILLS	16.0
		4	WATER PUMPS	48.0
SUPT. WORKING ON ELECT. GENERATORS WITH ELECT.	JAN. 23	1	$\frac{3}{4}$ TON TRUCK	8.0
CASE CO. MEN WORKING IN TUNNEL WHEN LIGHTS ON.	(SAT.)	2	AIR COMPRESSORS	16.0
ELECT. PLANT OUT OF ORDER UNTIL AFTER 2 P.M.		1	ELECT. GENERATOR	2.0
	JAN. 25.	1	$\frac{3}{4}$ TON TRUCK.	8.0
		3	ELECT. GENERATORS	27.0
		2	AIR COMPRESSORS	32.0
		1	AIR LOCOMOTIVE	8.0
2 CASE CO. MEN CUTTING OUT REROUND TONITE.		2	JACK HAMMERS	16.0
SHEA CO. MEN CUTTING OUT HIGH ROCK AND DRAINING.		3	SLUDGE PUMPS	24.0

	DATE:	NO.	EQUIPMENT:	HRS.
ONLY 2 COMPRESSORS USED ON DRY SHIFT-NO GONITE.	JAN. 26, 64	1	$\frac{3}{4}$ TON TRUCK	8.0
		3	AIR COMPRESSORS	40.0
		3	ELECT. GENERATORS	48.0
		1	AIR LOCOMOTIVE	16.0
CUTTING OUT HIGH RIDGES IN BOTTOM.		1	ROCK DRILL	8.0
BIG PUMP USED 6 HRS. TODAY, FOR PRESSURE.		4	WATER PUMPS	38.0
	JAN. 27.	1	$\frac{3}{4}$ TON TRUCK	8.0
		3	AIR COMPRESSORS	48.0
		3	ELECT. GENERATORS	48.0
		1	ROCK DRILL	8.0
		1	AIR LOCOMOTIVE	16.0
BIG PUMP USED 14 HRS. TODAY.		4	WATER PUMPS	46.0
	JAN. 28.		SAME AS JAN. 27 EXCEPT:	
BIG PUMP USED 16 HRS. 3 SLUDGE PUMPS USED 8 HRS EACH.		4	WATER PUMPS	40.0
	JAN. 29.		SAME AS JAN. 27 EXCEPT:	
BIG PUMP USED 14 HRS. 3 SLUDGE PUMPS USED 32.0 HRS.		4	WATER PUMPS	46.0
USED BY INSPECTOR'S TAKING X-SECTIONS -	SAT. JAN 30.	1	ELECT. GENERATOR	6.0
SUPT. COULD NOT GET IT STARTED UNTIL 10 A.M.				

NO LIGHTS AT N. PORTAL TODAY.

AT N. PORTAL.

AT N. PORTAL.

USING A SMALL PISTON PUMP FOR GROUTING.

USING ONE OF CASE CO. LOADERS FOR AIR PRESSURE.

500 COMPRESSOR OUT OF ORDER 10:30 P.M. FEB. 4,

WITH BROKEN PISTON. USED CASE CO.

PORTABLE COMPRESSOR, STARTING AT MIDNITE,

FEB. 4-5.

DATE:	NO.	EQUIPMENT.	HRS.
FEB. 1, '54	1	$\frac{3}{4}$ TON TRUCK	8.0
	3	AIR COMPRESSORS	72.0
	2	ELECT. GENERATORS	48.0
	1	AIR LOCOMOTIVE	24.0
	1	JACK HAMMER	8.0
	4	WATER PUMPS	96.0
	1	WELDING GENERATOR	1.0
FEB. 2, '54.		SAME AS FEB. 1, AND:	
	1	AUX. ELECT. GENERATOR	8.0
FEB. 3.		SAME AS FEB. 1, EXCEPT:	
	NO	WELDING GENERATOR TIME.	
	1	AUX. ELECT. GENERATOR	8.0
	1	GROUT PUMP	8.0
	1	SHIP LOADER-COMPRESSOR	8.0
FEB. 4.		SAME AS FEB. 1 EXCEPT:	
	3	AIR COMPRESSORS	62.5
	NO	AIR WELDING GENERATOR.	
	1	GROUT PUMP	8.0
	1	SHIP LOADER COMPRESSOR	8.0
	1	D-8 DOZER	1.0

NOTE: CASE CO. 500 AIR COMPRESSOR IN USE  
IN CONJUNCTION WITH SHEA CO. COMPRESSORS  
TODAY. SMALL LIGHT PLANT REMOVED FROM  
N. PORTAL TODAY.

PLUGGING TIGHT SPOTS IN BOTTOM.

NOTE: ROGERS GENERATOR STILL IN USE AT S. END.  
CATERPILLAR GENERATOR SETTING OVER CORE  
HOLE #2 DISCONTINUED AT 8 A.M. TODAY, AND  
MOVED TO S. END AS A STAND-BY GENERATOR.

COMPLETED PLUGGING TIGHT SPOTS IN BOTTOM.

DATE:	NO.	EQUIPMENT.	HRS.
FEB. 5, '54	1	3/4 TON TRUCK	8.0
	2	AIR COMPRESSORS	32.0
	2	ELECT. GENERATORS	32.0
	1	WATER PRESSURE PUMP	16.0
	3	SLUDGE PUMPS	48.0
	1	AIR LOCOMOTIVE	16.0
	1	ROCK DRILL	8.0
FEB. 8, '54		SAME AS ABOVE EXCEPT:	
	2	ELECT. GENERATORS	32.0
	2	AIR COMPRESSORS	48.0
	1	WATER PRESSURE PUMP	24.0
	1	AIR LOCOMOTIVE	24.0
FEB. 9.	1	3/4 TON TRUCK	8.0
	2	AIR COMPRESSORS	48.0
	1	ELECT. GENERATOR	24.0
	1	AIR LOCOMOTIVE	24.0
	1	WATER PRESSURE PUMP	24.0
	1	ROCK DRILL	8.0
	2	SLUDGE PUMPS	48.0

CONT'D IN BACK HALF OF "PERSONNEL BOOK #2."

EQUIPMENT REMOVED FROM JOB.

OCT. 15, '53. 2 - COPCO DRILLS SER. NO. 456608

" " " " 412626

4 - 6 FT. DRILL STEELS, USED.

3 - STARTER DRILL STEELS. "

2 - COPCO PUSHER LEGS "

2 - AIR HOSE SETS.

2 - WATER HOSE SETS.

1 - OIL BOTTLE.

REMOVED IN SHER CO. PICK-UP TRUCK TO  
CAPALCO TUNNEL.



## EQUIPMENT PAID FOR:

COST.

1 - MODEL S-211 JOB TURNWHAIR SLUSHER HOIST <sup>2</sup> 5596.	1,080.00	MINE & MILL MACHINERY CO.
1 - 26" PACIFIC SLUSHER SCRAPER.	205.00	INV. No. 51106,
3 - 6" SHOOKUM SLUSHER BLOCKS - SWIVEL HOOK.	89.10	
6 - 1 1/2" X 10" PACIFIC SHEAVE ANCHORS.	38.70	
300 L.F. 5/16" PREFORMED WIRE ROPE.	32.50	
10 - 5/16" CROSBY CABLE CLAMPS	5.50	
3% SALES TAX.	43.61	
TOTAL.	1,497.41	

EQUIPMENT PAID FOR:

1- TRAMMIRE AIR LOCOMOTIVE } \$1,030.00  
 2- FLAT CARS }

HAWTHORNE MICHAELS VENTURE INV. #0074.

1- SUTORBILT BLOWER, USED. \$1,545.00  
 MOTOR & PARTS FOR BLOWER \$316.85  
 9- 1/2", 24 GAUGE, MINE CARS. \$2,182.10

W.L. MCGONIGLE CO. INV. #127.  
 GRAYBAR ELECT. CO. INV. SHN-78 (3 SHEETS)  
 CONNOLLY-PACIFIC CO. INV. #663. (\$250.00 EACH)

1- MODEL 12-B EIMCO ROCKER SHOVEL. \$3,045.71  
 1- MODEL 401 EIMCO AIR LOCOMOTIVE. \$2,420.50

EIMCO CORP. INV. #35807 A.  
 " " " #35806 A.

1- MODEL 401 AERQUILT AIR TANK. \$271.67  
 FREIGHT ON AERQUILT AIR TANK 40.79.  
 312.46

EIMCO CORP. INV. #86164A. CREDIT MEMO 40010A.  
 EIMCO CORP. INV. #39337A

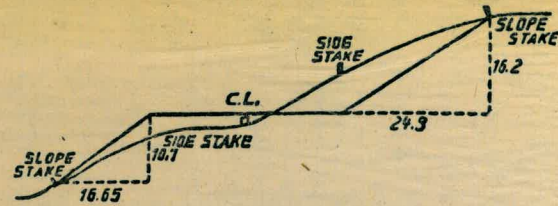
2- USED IR ROCK DRILLS 463.50

SHER CO. #384. DRILL No's: 17A55-442905 AND:  
 17A55-487806.

1- NO 7 SLUDGE PUMP SER. #861300. \$345.05

CHICAGO PNEUMATIC TOOL CO. INV. #173-10864  
 DATED 8-24-58.

NOTE: PRICE SHOWN INCLUDES CALIF. SALES TAX.



**DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.**  
SLOPE  $1\frac{1}{2}$  TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

THE NATIONAL BLANK BOOK COMPANY  
HOLYOKE MASSACHUSETTS  
NEW YORK CHICAGO BOSTON SAN FRANCISCO