

KER REMER

AD * 1921

INSTRUCTION

FIELD BOOK

361

107

KEUFFEL & ESSER CO.

DRAWING MATERIALS

AND

SURVEYING INSTRUMENTS.

NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

Tables for Excavations and Embankments.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.
FOR SINGLE TRACK EXCAVATION.

" Copyright, 1895, by Keuffel & Esser Co."

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	0
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	1
2	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	2
3	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	3
4	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	4
5	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	5
6	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	6
7	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	7
8	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	8
9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	9
10	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	10
11	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	11
12	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	12
13	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	13
14	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	14
15	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	15
16	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	16
17	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	17
18	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	18
19	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	19
20	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	20
21	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	21
22	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	22
23	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	23
24	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	24
25	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	25
26	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	26
27	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	27
28	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	28
29	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	29
30	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	30
31	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	31
32	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	32
33	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	33
34	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	34
35	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	35
36	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.

FOR KEITH'S RAILROAD CURVE TABLES SEE END OF BOOK.

Walker-Romer Road

Summer 1921

Butler Smith Res Eng

4/14

INDEX

Page	Page	Sta.	Description
1	3		index
4	5	597-616	X sections 15 ⁺
14	15		
16		399+50 405	X sections
18	20		Has been revised X sections
21		553 546	X sections
22		558 553+	X Sec.
23	26	556 584	X Sec.
27		121 132	finishing stakes
28		88+23 93+50	" "
29		100+00 101	X Sec.
29		67 69	X Sec.
30		517 522	X Sec.
30		519+70 522+70	X Sec.
31		532 535	X Sec.
31	32	522+40 530	X Sec.
33			force acct Peterson
34	36		" " L. Sorenson-Sub
37	39		" " Stone & Johnson-Sub
40	41		" " Moon & Salem-Subs.
42	45	584 617	Levels on change.

INDEX

Page	to Page	Sta.	to Sta.	Description
46	47			force Acc't.
49	51			Diary
55	645	659		Revised Grade
56	57			force Acc't - Noble - Sub.
58	^{PC.} 551+00.3	^{PT.} 552+93.6		Curve Data
58	^{PC.} 560+72	^{PT.} 562+72		" "
60	^{PC.} 316+61.7	^{PT.} 320+36.7		Curve Data

INDEX

2

3
 R. E. Krueger Remer Minn.
 J A Harker July 16 1920.

clear — calm — warm.
 Mosquitoes numerous.

Looked up points between
 Remer and old Ty Grade
 preparatory to staking
 clearing. No reference
 points in this part of
 work

Found a heavy chain in
 looking for stakes took
 this along as it might
 come in handy in pulling
 myself out in case getting
 mired in swamp.
 Extra long bills

R. E. Krueger 7-16-1920
 Scholtz & Chambers, pm. shoppers.
 At Harker a.m.
 Produced Main st to sec
 line sec 1-2 and used same as
 corner. Found cor about sta
 1741 — Ran clearing stakes
 Sta 1705 — 1794.

Blue Tops.

June 11, 1921

Bather,

50.00 Callender Bros

42.0

~~49.00~~

45.80

200	42.0
201	41.5
202	41.0
203	41.0
204	41.0
205	41.0
206	41.0
207	41.6
208	43.6
209	45.4
210	47.2
211	47.2
212	45.5
213	43.5
214	40.8
215	38.3
Total	12.35 37.65

6

7.5	8.0
7.5	8.5
8.0	9.0
	9.0
	9.0
	9.0
	9.0
7.4	8.4
5.4	6.4
3.6	4.6
1.8	2.8
1.8	2.8
3.6	4.5 ✓
5.5	6.5 ✓
8.7	9.0
10.7	11.7

M.C. Sta. 215 + 45.7

Apr 29 1921. Rielly, Cross-sections.

Sta. 399+50 to 405+00

(Baker
Baker
Noble
Pty)

16

Sta.	Elev	Grade	L.	C.	R.
399+50			+7.3	+2.3	0.0
			<u>27.3</u>		6.9
400+00			+5.3	-7.3	-11.8
			<u>21</u>		30.7
400+20.7 P.C.			-12.2	-10.2	12.9
			<u>31.3</u>		32.3
400+50			-12.9	-12.7	-12.9
			<u>22.3</u>		22.3
401+00			-13.9	-13.9	-13.9
			<u>33.8</u>		33.8
401+50			-6.2	-12.9	-14.9
			<u>22.3</u>		35.3
402			20.00	-0.3	-1.0
			<u>20.13</u>		14.5
402+45.3 P.T.			+5.9		+5.9
			<u>25.9</u>	+5.2	25.9
403			+7.8		+10.3
			<u>27.8</u>	+9.3	30.5
403+60			+6.6		+7.3
			<u>26.6</u>	+6.6	27.3
404			+7.9		+7.9
			<u>27.9</u>	+8.9	27.9
405			+0.6		+1.2
			<u>20.6</u>	+1.2	21.5

584

to 60

17

A grid of 20 columns and 20 rows on a graph paper page. The grid is formed by light green lines. A vertical red margin line is positioned to the left of the grid, and a vertical red margin line is positioned to the right of the grid.

H.I.

~~Has been
Revised~~

		1331.00		
Two sta 603	602	1322.4	1328.57	1.058
		21.5		
	603	1319.7		0.56
	603+05	1314.4		1317.99
	604	1310.4	1318.55	
	605	1308.9		
	606	1308.4		11.45
	607	1307.9		1307.10
	608	1307.4		
	609	1306.9		4.13
	610	1307.1		1311.22
	611	1308.1		1.78 on rock
	+67	1308.7		5.80
	612	1309.1	1315.24	
	613	1310.1		4.75
	+50	1310.6		
	614	1311.1	1.88	1310.99
	615	1311.5		
	616	1311.2	1311.87	1.68
	+10			1310.19

		C 2.3		
		22.3		C 4.0
		00		F 2.0
		20		F 4.1
		20		18.2
		00		F 1.4
		20		F 4.2
		17		18.2
		217		F 1.8
		13		F 3.3
		15		16.1
		F 2.2		F 3.2
		153		17.7
		F 0.5		F 2.3
		128		16.2
		F 0.6		F 1.9
		129		14.9
		F 2.8		00
		162		00
		F 2.6		F 0.8
		15.9		13.2
		00		F 0.3
		20		13.2
		00		00
		20		00
		F 1.6		F 1.5
		14.4		14.1
		F 1.8		00
		14.8		00
		F 0.4		00
		12.6		00
		F 1.4		00
		14.1		00
		F 1.3		00
		14.1		00
		F 1.0		00
		13.5		00
		00		00
		20		20

Ditch not necessary drains into lake

drains into rock

2.3
55
4
19
16.0

DC 1.6
DC 1.0
DC 1.0
19.6
19

Noble started work here 9-4-20

19

Fill
Yardage

HT

B.M.

67

9-3-20

Res

617		1309.9		
618		1307.6		
619		1305.4		
620		1303.1		
621		1300.85		
+70		B.M. 621+50	12" Basswood	
		60' RT	El. 1310.90	
		2.25	1313.15	
622		1298.6		
622+30	27			
+45	178	1297.9		
623	216	1296.4		
624	243	1294.1		
625	415	1293.0	1289.74	
626	406	93.0		
627	345	93.0		
628	347	93.0		
629	360	93.0		
630	329	93.0	3.45	Iron Monument
631	329	93.0	1291.99	
632	311	93.0	1294.44	
633	268	93.0		
634	308	93.0	1295.04	2.90
635	345	93.0	1294.89	
636	331	93.0		
637	336	93.0		

Revised

24.0	127	$\frac{00}{20}$	C0.2	$\frac{00.4}{20.4}$	$\frac{00.4}{20.4}$
44.5	361	$\frac{00.4}{20.4}$	C0.8	$\frac{00.8}{20.8}$	$\frac{00.8}{20.8}$
150.4	678	$\frac{01.2}{21.7}$	C3.4	$\frac{03.1}{23.1}$	$\frac{03.1}{23.1}$
215.9	1010	$\frac{02.4}{22.4}$	C5.1	$\frac{05.4}{25.4}$	$\frac{05.4}{25.4}$
329.8	946	$\frac{04.7}{24.7}$	C7.4	$\frac{07.4}{27.4}$	$\frac{07.4}{27.4}$
400	2.25	$\frac{05.8}{25.8}$	C8.2	$\frac{09.6}{29.6}$	$\frac{09.6}{29.6}$
	387				
297.0	169	$\frac{00}{20}$	C7.1	$\frac{08.6}{28.6}$	$\frac{08.6}{28.6}$
F15.0 (8.0)	18	$\frac{00}{20}$	00	$\frac{00}{20}$	$\frac{00}{20}$
81.0		$\frac{03.4}{17.1}$	F2.5	$\frac{03.2}{16.8}$	$\frac{03.2}{16.8}$
93.7		$\frac{03.3}{17.1}$	F2.8	$\frac{03.1}{18.1}$	$\frac{03.1}{18.1}$
22.8		$\frac{02.0}{17.1}$	F0.8	$\frac{00}{12}$	$\frac{00}{20}$
108.2		$\frac{03.5}{17.6}$	F3.2	$\frac{04.6}{18.9}$	$\frac{04.6}{18.9}$
116.0		$\frac{02.0}{15}$	F4.4	$\frac{04.8}{19.2}$	$\frac{04.8}{19.2}$
103.1		$\frac{03.1}{16.7}$	F3.2	$\frac{05.6}{20.4}$	$\frac{05.6}{20.4}$
83.2		$\frac{03.6}{17.4}$	F2.3	$\frac{03.6}{17.4}$	$\frac{03.6}{17.4}$
104.4		$\frac{03.9}{17.9}$	F2.9	$\frac{04.6}{18.9}$	$\frac{04.6}{18.9}$
90.2		$\frac{03.5}{17.3}$	F2.3	$\frac{04.6}{18.9}$	$\frac{04.6}{18.9}$
87.7		$\frac{03.3}{17.1}$	F2.2	$\frac{04.7}{19}$	$\frac{04.7}{19}$
90.1		$\frac{03.3}{17.1}$	F2.2	$\frac{05.0}{19.5}$	$\frac{05.0}{19.5}$
77.6		$\frac{03.2}{16.8}$	F2.2	$\frac{03.4}{17.2}$	$\frac{03.4}{17.2}$
67.3		$\frac{02.9}{16.4}$	F1.8	$\frac{03.3}{17}$	$\frac{03.3}{17}$
99.1		$\frac{02.9}{16.4}$	F2.4	$\frac{05.3}{17}$	$\frac{05.3}{17}$
87.0		$\frac{02.9}{16.4}$	F2.4	$\frac{05.1}{18.2}$	$\frac{05.1}{18.2}$
91.6		$\frac{03.1}{16.7}$	F2.3	$\frac{04.8}{16}$	$\frac{04.7}{19.1}$

Iron Monument

colored
24.2
mending

Fill
Yardage

H.I.

T.P.E.

638 1293.0 1294.89 374 1291.15

344

639 331 1293.0

640 291 93.0

641 286 93.0

642 287 93.0

643 283 93.0

644 354 93.0

645 520 93.0

646 166 1293.8

646+35 16

646+45

+55 1295.8

+70 1307.01

647 1296.8

+50 1298.7

+60 1299.2

648 1300.6

Pen

B.M.

646+50 spike 18" pipe

50' Lt. sta. El. 1295.28

11.73

90.0	F3.7	16.7	F2.5	F4.5	18.8
95.6	F3.3	17.4	F2.5	F5.0	19.5
83.3	F3.2	16.8	F2.0	F4.7	19.1
73.7	F3.6	17.4	F1.7	F4.8	19.2
80.6	F3.7	17.5	F2.2	F3.4	17.1
74.5	F3.5	17.3	F2.1	F3.0	16.5
78.2	F2.7	16.1	F2.6	F3.2	16.8
112.8	F2.8	16.2	F3.6	F5.2	19.8
168.2	F4.8	19.2	F5.2	F5.9	20.8
87.9	F2.2	14.9	F3.9	F2.0	15
0	00	20	00	00	20
	C3.0	20	C4.9	C4.9	24.9
	23	17	C4.7	C8.1	28.1
	C7.4	27.1	C7.4	C6.7	26.7
	C6.1	26.1	C7.6	C1.5	00
	C4.8	24.8	C1.5	F3.0	15
	00	00	00	00	20
	7 times	00	F0.5	C4.4	18.0
		5		18.0	

			73.26	(ground)	CUT		
553	12.5	12.3	6.9	6.9	61.0	11.0	17.7
			6.3	16.9		-5.6	-6.8
552+337	9.0	9.0	7.3	16.0	64.0	-1.7	-1.7
						14.6	14.6
+25	7.4		7.4		65.9	+0.9	+0.9
552	4.5	4.8	8.2	6.1	68.5	13.7	13.7
						23.7	23.7
+50	8.9	4.4	8.0	6.5	68.9	+0.1	+0.1
						13.6	13.6
551	7.1	5.0	10.2	6.3	65.3	+3.1	+3.1
						20.1	20.1
+50	11.9	10.0	11.7	6.6	63.1	+1.8	+1.8
						15.0	15.0
T.P.	-0.03		63.99	9.22	64.02		
550	7.1	5.9	4.0	5.9	52.1	-3.1	-3.1
						16.0	16.0
+50	10.6	6.0	6.0	5.8	57.6	-0.2	-0.2
						15.9	15.9
549	11.4	12.0	8.0	8.0	51.5	-3.4	-3.4
						16.1	16.1
T.P.	2.52		54.76	11.75	52.2		
548+15	10.0	2.0	2.0	5.6	52.3	-7.8	-7.8
						23.0	23.0
547+85	11.1	6.0	3.2	5.4	47.9	-7.7	-7.7
						23.2	23.2
547+35	10.2	11.0	5.0	4.8	42.0	-5.2	-5.2
						19.8	19.8
546+55	4.5	7.9	6.0	4.8	46.9	+1.5	+1.5
						21.5	21.5
546	15.0	7.0	7.0	4.8	49.9	+5.5	+5.5
						20.4	20.4

634
320
70

15
4
0

70
63
0

21.

check	Area	Emb.	Grade
0			67.0
160	3		
1659	84		
2212	358	+5.1	+4.1
	292	25.1	24.1
944	158		64.3
759	70		
00			41
21.5	20		76
30	23		176
	66		
39.5	24		
45	9		
1098			
			E 1099
			F 1024
			64.0
			5.2
			58.8
			1.8
			59.9
			7.2
			7

6 slips & teamsters.
 1 plow &
 2 extra men & boss.

Oct. 20th

B.M.	441	1370.89		1376.78
T.O.	8.80	76.47	34.2	67.67
	1000.	Grade		CUT
	14 to 17.	7d. El.		LT. 4
558	11.5	106 11.6	8.2	63.12
+45	7.9	9.5	10.4	7.9
+10	7.2			7.2
557	5.6	6.5	7.1	69.37
+60	4.2	5.0	4.5	6.6
+30	6.2	6.3	5.3	1.2
+20		7.2		6.2
556	7.7	6.9	11.9	70.3
+50	5.9	4.9	5.5	5.2
555	4.9	5.1	6.6	70.9
T.P.	9.46	81.87	4.06	72.4
+75	10.4			10.4
+50	6.2	6.7	4.6	10.6
554	2.5	10.0	1.4	70.3
+60	2.4	12.0	1.5	11.4
553	6.2	10.7	12.1	10.9
T.P.	1.53	73.27	10.13	71.74
B.M.			4.40	68.87
B.M.	441	732.6		68.85
552+468				do
554+290				
552	1.7	5.1	5.3	5.46
553+325	1.22	9.0	6.7	6.85
553+30	1.2	5.7	4.9	1.74

		Grade		
63.9	733			
67.0	50	B.M.	68.85	
69.3			3.60	
70.0	434	H.I.	72.45	
71.5	966		1.53	
70.7	260		70.92	
69.6	3.2		2.32	
67.6	00	H.I.	73.25	
71.4	86		2.42	
		T.P.	63.82	
			0.26	
			64.08	
				63.82
				3.58
		H.I.	67.42	
			10.34	
71.5		T.P.	57.06	
			0.70	
75.2			69.2	
		H.I.	57.76	
71.9	119.7		1.11	
69.9	103.0		46.65	
71.2	121.1		0.24	
		H.I.	46.87	
			1.60	
		T.P.	43.27	
			11.56	
		H.I.	56.82	
			8.55	
		T.P.	48.27	
			0.45	
			48.72	
69.2				
68.5				
69.2				

Mackey - a.f.		Oct 9 1920	7A	Road Elev.	Grade Elev.
B.M.	1.32	68.10		1366.78	
556					70.6
557					69.4
58				63.6	68.2
59				66.4	66.9
60				65.4	65.7
61				64.8	64.4
62		4.7		63.4	63.8
+56		5.8		62.3	62.6
63		7.1		61.0	61.9
+50		8.2		39.9	60.8
64		9.3		51.7	59.6
65		11.0		57.1	57.3 ^{10.1}
66		12.5		55.6	55.0
0	1.79	57.52	12.37	1355.73	
67	1.7		5.5	52.0	52.8
68 ✓			7.4	50.1	50.5
69 ✓			11.1	46.4	45.5
0	0.19	1347.42	10.29	1347.23	
70 ✓			6.9	40.5	40.51
71 ✓			11.3	36.1	37.7
72 ✓			11.1	36.3	37.1
73			11.0	36.4	37.7
74			9.1	38.3	39.2
75			4.1	43.3	44.0
0	11.49	1357.67	D.24	1347.15	

Mackey B.M. 572. 10' oak 50' high
 3409 - 5844.00 733 - 1353.08 23
 L. 674 R.

		46.9	
F 3.2	F4.6	F3.6	
0 2.6	F0.5	F5.0	
22.6	F0.3	C1.0	
C 0.4	C.A	C2.9	
C1420.4	C0.2	C3.0	
21.4	F0.3	C4.9	
C1.6	F0.9	C5.9	
21.6	F0.2	20.7	
F3.2	F0.8	F2.0	
514.8	F0.9	115.0	
	F0.2		
F3.0	F0.8	F0.7	Little graded
16.5	F0.2	13.1	
F1.2		0.0	
18.4		1.7	
F0.6	C0.6	C4.5	
20.6		24.5	
54.4			
518.6	F0.8	F3.3	
C6.4	F0.4	17.9	
26.4		C5.6	
20.7	C0.9	25.6	
1.7		0.0	
	0.0	2.0	
F6.4	0.0	F7.0	
21.6		22.0	
C1.1	F1.6	F3.4	
21.0		2.0	
C2.0	F0.8	F1.2	
2.0		1.0	
C2.8	F1.3	F3.6	
22.8		3.6	
C1.0	F1.0	F10.4	
21.0		27.6	
F6.0	F0.7	F12.0	
21.0		30.0	

Slope more than 1:1

Dr. L. Mackey, C.E. Oct. 9, 1920.

+	S.	+	- S.	Road Elev.	Grade
	11.49	1358.67	56.8		
576 ✓			9.6	49.0	49.0
77			5.7	53.0	53.3
78			6.2	52.5	54.5
79			6.3	52.4	54.3
0	7.46	1356.17	6.95	1351.72	
B.M.			3.12	1353.06	
80 ✓			4.6	51.6	53.6
+70			2.3	53.9	53.2
81 ✓			2.5	53.7	53.0
82 ✓			4.6	51.6	52.2
83 2'			8.2	48.0	50.6
84 1'4"			10.2	46.2	45.0
+30		1369.0			
+65		1368.6			
558		1368.2			
559		1367.0			
+20		1366.8			
+50		1366.4		1371.82	
560		1365.7		551	1366.31
+50		1365.1		2.62	
561		1364.5			
562		1363.7		1369.98	
+50		1363.0			
+75		1362.6		0.30	1361.71
563		1361.9		1362.01	
564		1359.6			

R. 24

579+40	F 0.6	14.0	F 0.6	F 0.6	F 0.6
580+30	F 1.0		F 1.0		F 1.0
578+40	F 0.2	17	F 0.6		F 0.6
	C 0.2	20.2			D.C. 1.7
	F 0.9	13.4	F 0.3		20.0
	F 1.5	14.3	F 2.4		F 2.1
			F 1.9		15.0
557+50	C 3.1	23.1	F 0.6		F 1.4
					D.C. 5
orig. Elev.					1353.08
	F 2.0	15	F 2.0		F 2.1
			C 0.7		15.2
			C 0.7		C 1.4
					21.4
			F 0.6		F 1.6
			F 2.0		14.7
			C 1.2		C 0.7
					24.0
					C 5.3
					25.3
			F 1.2		F 1.5
			F 1.5		15
			F 0.8		F 3.0
			F 0.8		16
			0.0		F 0.0
			C 1.7		21
					F 2.4
					15.0
					0.0
					20
48.6			C 0.7		C 1.4
51.7	93		C 1.1		21.1
13.3	153		C 2.2		C 3.5
49.7	302		C 0.9		23.5
8.0	54		0.0		0.0
	15		F 0.6		12.8
			F 0.6		F 0.6
			F 2.6		F 1.8
			F 2.0		12.9
					14.7
					F 1.6
					D.C. 25
					18.5

Co. 1/2
Exc.

565		1357.4	
+45	98		
+75	133	1355.9	
566	121	1355.7	
+30	47	1354.4	
+50	19	1353.7	
+72	418	1353.2	No culvert here draw N. 3 S. +
+90		1353.0	
567	No 500	1362.01	Alotment loc
+35	5		
	420		10.1 B.M. 1351.1
567+90		1351.5	
	448		
+25	424	1350.2	1358.21 T.P. 00 Sta 20' L
+75	83	1346.7	E1 1345.
568+98	6	1345.5	
+26		1344.5	0.02
570	1386	1340.5	
571	5	1337.7	1345.72
+80	4		Stump 4
+90			1337.11
572	10	1337.1	
+40	138	1337.3	
+65	92	1337.4	
573	43	1337.1	
+50	19		
574	321	1339.9	1347.21

16.0	F4.6 19 00 20	F4.6 00	F4.6 00
61.0	C3.2 23.0	C3.8	C2.6 22.4
25.5	00 20	C2.9	C4.5 24.5
22.1	00 20	C3.3	C3.7 23.7
24.0	F3.0 10.5	00	C2.6 22.6
0.0	F4.5 18.8	F3.0	00 20
	C4.5 18.8	F4.7	F4.0 1.8
16.0	00 20	00	00 20
6.5	C6.4 26.4	C9.9 11	C9.5 2.5
4.2	C4.7 24.7	C6.3 11	C5.4 23.4
3.3	C1.5 21.5	C3.9	C4.3 24.3
16.0	00 20	00	00 20
0.0	6.0 21.0	F6.3	F6.0 21
	F6.6 21.3	F7.3	E7.1 22.6
8.0	C1.0 21.9	F2.5	F6.5 21.5
5.0	00 20	F1.6	F3.2 16.5
18.0	C1.0 21	00	F1.1 16
36.4	C2.0 22	C0.6 6	F2.1 15.2
50.4	C5.1 25.1	C3.7	00 20
48.0	C4.0 24	00	F3.0 17.4
18.0	C2.0 22	00 10	F7.4 23.4
3.0	00 20	F3.6	F1.0
	00 20	F4.1	F1.05 2.7

Exc.
Co. Yds.

575		1344.0	1347.21	
+25		45.2		TR Top 20' left
+55	319	1347.0		← Coastake El. 1347.31
576	321	1349.0		01
+25	273	1350.4		
+55	242	1352.2		
577	96	1353.34		
+30	40	1354.4		Rock
+70	5		1353.79	
578	2	54.5		
+40	3	1354.7	6.36	
579	4	1354.3		
580	3	1353.6	5.06	
+30	10		5.29	
+50	30	1353.3		
+68	73	1353.4		
581	2100	1353.0	1359.55	
+85	95			Note
+40	12	1352.7		
582	1628	1352.2		
+40	5	1351.8		
583		1350.0		
+80		47.8		
584		1345.0		

26

	$\frac{F63}{215}$		$\frac{F12.0}{30}$
	$\frac{F8.0}{24}$	F8.3	$\frac{F8.4}{24.6}$
	$\frac{00}{20}$	00	$\frac{00}{20}$
160	$\frac{C95}{295}$	00	$\frac{C4.9}{24.3}$
366.5	$\frac{C8.0}{28}$	C7.9	$\frac{C4.1}{24.1}$
327.0	$\frac{C5.6}{25.6}$	C7.3	$\frac{C4.7}{24.7}$
164.7	$\frac{C6.2}{26.3}$	C3.2	$\frac{00}{20}$
125.3	$\frac{C3.8}{238}$	C2.0	$\frac{F1.1}{13.7}$
48.0	$\frac{00}{20}$	00	$\frac{00.8}{18.8}$
6.0	$\frac{00.0}{13.8}$	F2.0	$\frac{F2.0}{15}$
2.59	$\frac{F1.2}{14.6}$	F2.1	$\frac{F2.3}{15.5}$
0.0	$\frac{00.0}{18}$	F2.0	$\frac{F3.5}{17.3}$
2.5	$\frac{00.0}{18}$	F1.2	$\frac{F1.4}{14.4}$
0.0	$\frac{00.0}{15}$	F2.5	$\frac{00.10}{19}$
6.4	$\frac{00}{20}$	F1.2	$\frac{F2.3}{15.5}$
21.0	$\frac{00.0}{13.5}$	0.0	$\frac{F2.0}{15}$
67.6/9.5	$\frac{F0.5}{12.9}$	C1.2	$\frac{C1.5}{21.5}$
55.8	$\frac{00}{20}$	C1.2	$\frac{C2.6}{22.6}$
35.0	$\frac{00}{21}$	C1.3	$\frac{C1.3}{21.3}$
79.3	$\frac{C.27}{22.7}$	00	$\frac{C0.9}{20.9}$
8.0	$\frac{00.0}{12.9}$	C1.7	$\frac{00}{20}$
	$\frac{F0.6}{12.9}$	F1.4	$\frac{F4.8}{16}$
	$\frac{F4.6}{18.9}$	F4.3	$\frac{F4.0}{18}$
	$\frac{F4.3}{18.7}$	F3.8	$\frac{00}{20}$
		00	$\frac{C1.0}{14}$
		00.7	$\frac{C3.0}{23}$
			$\frac{C3.1}{23.1}$

Finishing		Stakes		Grade
+S	-S	H.I	ELEV	
121 to 132				
119+60 B.M.	3.85	12.99	1325.76	1321.91
0	1.45		1314.32	1312.87
121		07.0		07.3
122		11.3		03.0
0	4.49	11.98	1306.83	1302.34
+50		6.0		1300.8
123		9.1		97.7
+50		10.8		96.0
124		11.6		95.2
+50		11.0		96.8
125		8.9		97.9
+50		6.0	1300.8	1301.5
126		3.1		1303.7
0	12.70	11.8	1318.35	1305.65
127		9.35		1309.0
128		4.35		1314.0
0	12.5	1.47	1329.40	1316.88
129		10.4		1319.0
130		5.4		1324.0
131		4		1329.0

10/4/20

Lind, Engr.
 Mackey, Instrument man
 McGuire Chain man
 Anderson " 27

OK at 300	00.8
	99.0
	98.0
	97.6
	98.1
raise	99.4
raise 0.7	01.5

Sta 121 to 132
 Finished Oct 6, 1920.
 Estimate wanted.

	255	1310.80		1308.25
B.M.			486	1305.94
0	213	1306.35	6.58	1304.22
93+50			4.3	1302.0
93			6.1	1300.3
92+50			8.4	1298.0
92			8.0	1298.4
91+69			9.3	1297.0
91			11.9	1294.5
90+50			10.8	1295.6
90			9.6	1296.8
89+50			9.3	1297.0
B.M.			6.20	1300.15
	122	1301.37		
89			5.5	95.9
88+50			9.7	91.7
88+23			7.10	94.3
			154	

94.5
23.5
71.0

1300

28

L. Min Oak 100 W of Br Sta 101+35

P T

92.94

1306.35
67
1299.7
2
1.975

R Nail 91+69 White Oak

Top of Ctr pile at end of br.
Ground Elev near center pile

3.28 1309.22 EI 130594 EI.

101 6.6 1302.6 1306.6
 0 2.49 1300.84 1087 1298.35
 100+50 1305.3
 100+20 1305.0
 100+00 1304.5

Grade
 67 1330.9 1332.3
 67+50 1329.4 1330.5
 68 1331.3 1328.8
 68+50 1327.8 1327.0
 69 1327.5 1325.3

L BM. XSEC 175. R 29
 $\frac{1305.30}{1290.6} = 147$

F2.6 16.0 F3.4 F4.1 18.2
 F9.5 26.3 F15.5 35.3
 F17.2 37.8 F17.4 38.0
 F17.3 38 F13.7 32.6

F0.7 13.1 F1.4 F 2.4 15.6
 C4.0 24.0 F1.1 F 0.9 0.9
 0.0 20 C 3.8 13.9
 0.0 20 C2.5 C 2.3 8
 0.0 20 C.08 C 5.8 25.8
 0.0 20 C2.2 C7.7 27.7

Contractor Peterson and

BM	930	6786	5826	Rt Sta
522	25 4.6 7.3	12.0 538	$\frac{115}{215} + 9.4$	$\frac{6.3}{26.3}$
521	41 5.3 6.8	12.0 558	$\frac{2.1}{27.9} + 6.7$	$\frac{5.2}{25.2}$
520	107 4.6 12.3	13.4 524	$\frac{2.2}{29.7} + 1.8$	$\frac{1.1}{21.1}$
TOP	2.01	5826	11.61	56.25
519+80	38 4.4 4.5	4.8 537	$\frac{1.2}{21.2} + 0.0$	$\frac{0.0}{21.2}$
+62	53	R. 65 R. 51.5	1.00	+1.58
+40	9.2 107 12.3	5.8 52.8 R. 7.5 R. 52.5 6.2 52.0	$\frac{-1.4}{16.5} + 4.5$	$\frac{6.8}{21.8} - \frac{4.9}{4.2}$
TOP	2.42	4.90	11.68	46.58
519	53 7.2 9.2	R. 0.1 R. 5.8 +1.8 50.9	$\frac{-5.0}{19.8}$	$\frac{-6.3}{21.5} - \frac{2.1}{8.1} - \frac{10.2}{27.3} - \frac{9.1}{25.9}$
518+60	83 9.3 9.9	R. 1.8 R. 4.7 1.0 48.0	$\frac{-6.5}{21.8}$	$\frac{-2.8}{29.0} - \frac{7.5}{8.0} - \frac{5.9}{25.2} - \frac{8.1}{24.0}$
518	9.0 8.2 9.0	R. 3.8 R. 5.5 3.5 48.5	$\frac{-5.2}{19.8}$	$\frac{-5.5}{21.0} - \frac{4.6}{4.8} - \frac{5.4}{24.3} - \frac{5.0}{19.8}$
+60	9.6 9.1 8.6	R. 2.7 R. 4.3 4.5 44.5	$\frac{-5.8}{19.7}$	$\frac{-5.1}{19.6} - \frac{4.9}{4.6} - \frac{4.1}{18.1} - \frac{3.9}{17.3}$
517	9.4 9.8 6.6	5.3 43.7	$\frac{-4.1}{18.1}$	$\frac{0.0}{2.5} - \frac{1.5}{14.0} + \frac{1.2}{19.2}$

O indicates revised. + is + - is -

Revision on P.C.

		5826	
519+70		6.5 51.8	
+80	7.3 4.4 4.0	6.2 52.1	$\frac{2.9}{22.9} + 1.8$
520	10.7 11.6 12.3	<u>6786</u> 15.1 52.8	$\frac{2.2}{24.4} + 3.5$
521	4.1 5.3 6.8	18.0 52.6	$\frac{1.9}{20.2} + 8.0$
522	2.5 4.6 7.3	14.7 53.7	$\frac{1.2}{22.2} + 10.1$
+40	3.5 2.4 3.2	<u>6107</u> 9.2 51.8	$\frac{1.8}{28.7} + 6.8$
+70		5.5	$\frac{1.5}{25.8}$

sublet from M.W. Barnard

@ 57

Per. ch. yard.

130

E

0.0	58
143.2	58
143.2	254
299.1	442
298.1	515
165.5	228
141.9	
324	
	1495
00	00+60
	38
102.1	101
170.6	1049
395.8	1672
507.0	624
335.5	
	3454
	2310
	5802

BM	+S	π	-S	Grade	Elev.
	2.84	1338.35			1335.51
535+00	5		9.3	29.0	31.5
534+40	4		10.0	28.3	29.0
534	3		6.3	32.0	28.4
533	1		9.8	29.5	25.3
533+60	2		6.5	31.5	27.2
T.P.	1.59	27.53	12.41		25.94

530			9.9	17.6	20.0
530+40			10.1	17.4	20.0
31			9.9	17.6	20.3
32			10.0	17.5	22.0

HP. Saranson. Oct. 19th. Train AM.
 Eg. Bator. Clear & Windy PM.
 McGuire.

To 55 Noble. 4 slips & transfers.
 1 plow &
 2 extra men & boss.
 4 freshes & transfers (horses)
 1 plow &
 2 extra men & boss

BM	251	1361.07	1358.36	Spike
522+40	24	4.0	1352.0	1358.36 + $\frac{56}{250}$
523	7.2	7.7	12.0	1358.36 + 4.5 + $\frac{13}{2+3}$
524	9.7	10.6	10.0	1358.36 + 6.1 + $\frac{20}{270}$
700	1.09	5.34	10.73	50.34
TP	1.88	41.83	11.89	39.95

377
 $\frac{16}{39.3}$

Area	L.	C	R.
D.C. $\frac{2.0}{20.0}$	F $\frac{1.4}{14.1}$	F 2.5	F $\frac{3.0}{10.5}$
C $\frac{2.3}{23.3}$	F 1.3	F 1.3	F $\frac{1.3}{14.0}$
C $\frac{5.0}{28.0}$	C 3.6	C 3.6	C $\frac{2.7}{25.7}$
210	C 4.6	C 3.2	C $\frac{1.6}{24.6}$
185	C $\frac{7.6}{27.6}$	C 4.3	C $\frac{6.1}{29.1}$
289	C $\frac{1}{29.1}$		
532+80			
532+80			
F 2.4	F 2.4	F 2.4	
15.6		15.6	
F 2.6		F 2.6	
15.9		15.9	
F 2.9	F 2.7	F 3.0	
16.4		16.5	
F 4.8	F 4.5	F 4.8	
19.2		19.2	
Quan			
532+80	A	Area	60 C yds
533	185	92.5	69
160	289	237	527
534	210	249.5	370
440	00	105	156
			1122
335.5	626		
227.6	1048		
338.2			
	644		
	231.8		

			1183					
+80	19	18	100			$\frac{+00}{200}$		
+90	23	23	390					
525	5.8 40	23	38	390		$\frac{-50}{165}$	$\frac{+00}{140}$	$\frac{+00}{215}$
+10		30	32	38				$\frac{+00}{200}$
700	065	3085	1163	3020				
526	78 52	3.5	+37	340		$\frac{-10}{285}$	$\frac{-66}{219}$	
527	11.2 9.1	6.6	18	29.0		$\frac{-96}{262}$	$\frac{-73}{222}$	$\frac{-68}{222}$
+80	12.5 10.6	9.2	58	25.0		$\frac{-67}{240}$	$\frac{-48}{171}$	$\frac{-84}{171}$
528	13.5 12.2	11.0	68	30.0	18.6	$\frac{-67}{220}$	$\frac{-42}{180}$	
700	14.2 138	12.5	9.6	30.2	17.1	$\frac{-68}{220}$	$\frac{-6.2}{194}$	$\frac{-23}{194}$
529	13.0 10.7	10.18	10.0	30.8	19.5	$\frac{-30}{165}$	$\frac{+00}{140}$	$\frac{+63}{217}$
+60	11.2 13.0	12.9	10.7	30.1	17.9	$\frac{-02}{200}$	$\frac{-02}{131}$	$\frac{-4.3}{150}$
+80	10.9	10.9	30.1	20.0				$+0.0$
530						$\frac{-24}{156}$	$\frac{-24}{156}$	$\frac{-24}{156}$

		00		
9.5		40.4		7
8.0				
				651
		Smith check		
		319	311.3	1087
		275	275.8	637
		155	154.4	122
		176	176.2	139
00	+80		199.2	357
12.8	5		41.6	102
6.3	21		50.1	18
16.0	8		00	25
00	4		66.2	
	<u>40</u>			

3145
1450
4660

3145
2308
5453

Sub-Contr. Welsh
May

1 May Ludwig Dahl
A.F. Kellar
Team

Oscar Sullivan
Milka Hahn

917
17
794

Q Peterson-

35

Force.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3/4
377
377
405
410

Chairmen: Engrs.
21
22

Contractors Louis Sorenson - sub let

July 12

" 13

" 14

" 15

" 16

" 17

" 18

" 19

" 20

" 21

" 22

" 23

" 24

" 25

" 26

" 27

" 28

" 29

" 30

" 31

Aug 1

" 2

Sat

Sun

Mon

Tue

Wed

Thur

Frid

Sat

Sun

Mon

from Barnhart at .48 per cu yd

Man

1 Man and horse

the narrow gauge track

3 dump carts

800 ft.

furnish own horse and driver

5 1

Sunday

5 1

5 1

5 1

5 1

0 0

5 1

Sunday

5 1

Aug 3

" 4

" 5

" 6

" 7

" 8

" 9

" 10

" 11

" 12

" 13

" 14

" 15

" 16

" 17

" 18

" 19

" 20

" 21

" 22

" 23

" 24

" 25

" 26

" 27

" 28

Tues

Wed

Thur

Frid

Sat

Sunday

Mon

Tue

Wed

Thurs

Frid

Sat

Sunday

Mon

Tue

Wed

Thur

Frid

Sat

Sun

Mond

Tue

Wed

Thur

Frid

Sat

Men

one man

and horse

ft narrow

gauge

cars

5 1

5 1

5 1

5 1

5 1

0 0

5 1

5 1

5 1

5 1

5 1

5 1

0 0

5 1

5 1

5 1

5 1

5 1

5 1

0 0

5 1

5 1

5 1

5 1

5 1

5 1

800 ft
3 dump cars

Aug 29
 " 30
 " 31
 Sept 1
 " 2
 " 3
 " 4
 " 5
 " 6
 " 7
 " 8
 " 9
 " 10

Sun
 Mond
 Tue
 Wed
 Thur
 Frid
 Sat
 Sun
 Mon
 Tue
 Wed
 Thur
 Frid

5 1

5 1

4 1

4 1

4 1

4 1

4 1

Sunday

4 1

4 1

4 1

4 1

4 1

Contractors Stone and Johnson Sub

let from Barnhart at 50 per cu yd.

July 6th

Sunday

" 7

Monday

8

Tue

9

Wed

10

Thur

11

Frid

12

Sat

13

Sun

14

Mon

15

Tue

16

Wed

17

Thur

18

Frid

19

Sat

20

Sun

21

Mon

22

Tue

23

Wed

24

Thur

25

Frid

26

Sat

27

Sun

Men at
1-horse grid
man at
flat narrow
gauge track
dump carts

4	1	2
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
4	1	
6	0	

- 400 ft -
Horse and driver, track and
dump carts furnished by Barnard

Aug 24

25

26

27

28

29

" 30

" 31

Sept 1

" 2

" 3

" 4

" 5

" 6

" 7

" 8

" 9

" 10

Tue

Wed

Thur

Fri

Sat

Sunday

Mon

Tue

Wed

Thur

Frid

Sat

Sun

Mon

Tue

Wed

Thur

Frid

4 1

4 1

4 1

4 1

4 1

0 0

3 1

3 1

4 1

4 1

4 1

4 1

Sunday

4 1

4 1

4 1

4 1

3 1

Force

Contractors Mowen and
Per cu. yd.

Aug-8- Sunday moving

" 9 Monday "
 " 10 Tuesday
 " 11 Wednesday
 " 12 Thursday
 " 13 Friday
 " 14 Sat
 " 15 Sun
 " 16 Mon
 " 17 Tue
 " 18 Wed
 " 19 Thur
 " 20 Frid
 " 21 Sat
 " 22 Sun
 " 23 Mon
 " 24 Tue
 " 25 Wed
 " 26 Thur
 " 27 Frid
 " 28 Sat
 " 29 Sun.

Report

Selem sublet from Barnhart at
 .60

Men at 90 per mo	Foreman at	Cook	Stableman	Teams	Frasnos	Slips	Plows
21	1	1	0	14	5	0	1
21	1	1	0	14	5	0	1
21	1	1	0	14	5	0	1
21	1	1	0	14	5	0	1
21	1	1	0	14	5	0	1
21	1	1	0	14	5	0	1
21	1	1	0	14	5	0	1
Sunday							
21	1	1	0	14	5	0	1
21	1	1	0	14	5	0	1
21	1	1	0	14	5	0	1
21	1	1	0	14	5	0	1
21	1	1	0	14	5	0	1
Sunday							
21	1	1	0	14	5	0	1
2	1	1	0	14	5	0	1
1	1	0	14	5	0	1	
1	1	0	14	5	0	1	
1	1	0	14	5	0	1	
Sunday							

Aug 30
 " 31
 Sept 1
 " 2
 " 3
 " 4
 " 5
 " 6
 " 7
 " 8
 " 9
 " 10

Men per month
 Foreman
 Cook
 Teams
 Fresno
 Slips
 Plans

	1	1	13	5	1	1
	1	1	13	5	1	1
5	1	1	13	5	1	1
	1	1	13	5	1	1
Sunday						
8	1	1	14	5	1	1
8	1	1	14	5	1	1
8	1	1	14	5	1	1
8	1	1	14	5	1	1
8	1	1	14	5	1	1

Levels on Change

	5.00	15.90		1310.90
617				
617			5.1	10.8
616+50			5.0	10.9
616			5.0	10.9
615			4.8	11.1
614+50			5.0	10.9
614			4.9	11.0
613+50			4.7	11.2
613			5.3	10.6
612+25			7.6	8.3
612			7.5	8.4
0	635	14.70	7.55	08.35
611+60			4.8	9.9
611			5.9	8.8
610+50			6.7	8.0
610			8.0	6.7
609			8.6	6.1
608			8.1	6.6
607			8.3	6.4
606			9.9	4.8
605			9.3	5.4
604			8.8	5.9
603			3.8	10.9
0	11.12	2494	0.88	13.82

617+09.5 P.I. = ⁴²

617+00

BM

~~not used~~

		24.94		
602			9.0	15.9
601			+1.0	25.9
0	667	30.86	0.75	24.19
600+50			2.9	28.0
600			3.1	27.8
B.M.			8.32	1322.54
599+50			5.2	25.7
599			6.8	24.1
598+50			7.3	23.6
598			8.7	22.2
597+50			9.1	21.8
597			10.3	20.6
596+75			11.6	19.3
0	1.15	20.66	11.55	19.51
596			4.~	16.5
595+50			8.0	12.7
595			8.0	12.7
594+50			10.1	10.6
0	0.42	09.85	11.23	09.43
594			6.4	03.5
593+70			12.3	97.6
593+48			14.3	95.6
B.M.	240	1306.75	11.50	1298.35
593+36			9.9	90.9
593+21			12.7	88.1

B.M. Nail in elm 60 L Sta 600

$$596+50 = 1317.5$$

N in oak 32 L 593+50

1300.75

44

593			13.0	87.8
592+70				85.7
	12.03	1310.38		98.35
592+33				90.0
592+12			13.3	97.1
591+75			6.8	03.6
591+50			2.2	08.2
0	11.12	20.98	0.52	09.86
591+25			9.0	12.0
591			7.0	14.0
590+75			4.5	16.5
590+50			1.2	19.8
0	11.85	32.83	0.00	20.98
590+25			11.0	21.8
590			11.3	21.5
589+50			13.6	19.2
589			13.6	19.2
588+50			12.7	20.1
588			7.5	25.3
587+50			3.5	29.3
587			1.1	31.7
0	12.21	44.77	0.27	32.56
B.M			10.15	34.62
586+50			12.2	32.6
586			9.8	35.0
585+50			7.5	37.3

P.T.

Top of Iron monument $\frac{1}{4}$ Cor. = 1334.60

1344.77

585

3.8 41.0

584+50

1.2 43.6

584

46.0

20

21

22

23

24

25

26

27

28

29

30

August

1

2

3

4

5

6

7

8

9

Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

Monday

Mon.
Tue.
Wed.

Sublet from Bernard at 45

1/4

45

1000 ft of ...
...
...

by Bernard

August	10	Tue	5 1
"	11	Wed	5 1
"	12	Thur	5 1
"	13	Frid	5 1
"	14	Sat	5 1
"	15	Sunday	0 0
"	16	Mon	5 1
"	17	Tue	5 1
"	18	Wed	5 1
"	19	Thur	5 1 - 1/2 day
"	20	Frid	5 1
"	21	Sat	5 1
"	22	Sunday	0 0
"	23	Mon	5 1
"	24	Tue	5 1
"	25	Wed	5 1
"	26	Thur	5 1
"	27	Frid	5 1
"	28	Sat	5 1
"	29	Sunday	0 0
"	30	Mon	5 1
"	31	Tue	5 1
September	1	Wed	5 1
"	2	Thur	5 1
"	3	Frid	5 1
"	4	Sat	5 1

One horse and driver, 2 dump carts,
and 1000 ft of narrow gauge track
furnished by Barnard