MINING
TRANSIT BOOK

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.

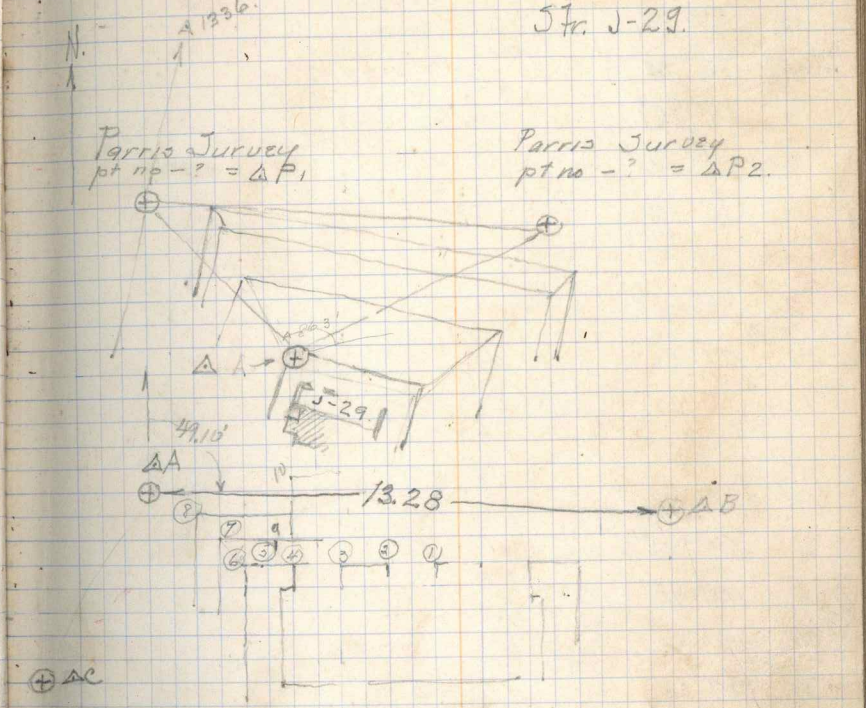
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	0
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	1
2	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	2
3	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	3
4	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	4
5	14.0	14.1	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	40.0	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

(1)

Pt. no.	Horiz ∠	Stadia reading	Vert. ∠
⊕ ΔA	0 on B		
P_1	164° 45'	1.8.5 / 1.4.3	26° 42'
P_2	78° 42	1.71 / 2.56	29° 30'
(1)	30° 13'		
2	38° 48'		
(3)	44° 4'		
4	51° 53'		
5	58° 3'		
6	61° 47'		
7	63° 14'		
8	64° 8'		
9	59° 10'		
10	50° 33'		
11	49° 52'		
12	40° 30'		
13	39° 58'		
14	22° 57'		
15	19° 12'		
(16)	18° 12'		
17	16° 22'		
18	16° 39'		
19	14° 53'		
20	9° 52'		
⊕ ΔB	0 on ΔA		
1	74° 54' (out 5 cm.		
2	67° 24'		
	67° 24'		

(10)

Str. J-29.



(2)

3	62°25'
4	57°45'
(5)	53°15'
6	53°15'
7	51°18'
8	50°10
9	51°56'
10	52°39'
11	49°10'
12	57°30'
13	53°28'
14	96°10'
15	109°33'
16	114°27'
17	118°46'
18	107°12'
19	106°18'
20	135°13'
△ F	157°2' ✓

⊼	A	0 on B.	
	B	0°0'	
	C	83°28'	✓
	D	64°14'	(E not visible) ✓
	F	12°44'	✓

(2.1)

	Horiz ∠	
⛪ △C	0 on △A	
8	35° 17'	
7	37° 32'	
6	41° 30'	
21	71° 12'	
22	79° 46'	
23	92° 38'	
24	100° 33'	
25	99° 13'	(Error)
26	102° 2'	
27	95° 15'	checks
△D	139° 31'	✓
△E	97° 41°	✓
⛪ D	0 on △C	
8	21° 7'	
7	21° 49'	
6	22° 52'	
21	20° 31°	
22	21° 52'	
23	22° 8'	
24	28° 31'	
25	28° 16'	(obvious error)
26	39° 26'	
27	40° 30'	5' error?
△A	21° 8'	✓

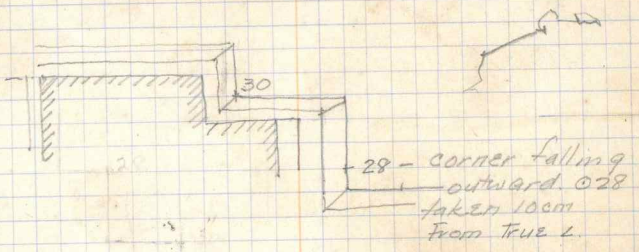
4/10/36.

J-29.

(4.)

	Horiz ∠	Stadia	Vert. ∠	
△E	103° 55'			
28	24° 19'	(see 4.a.)		
△B	48° 55'			
29	56° 41'	(center rear wall)		
30	36° 51'			
⊼B	0 on A			
F	157° 4'			✓
E	129° 44'	.58 .355	17°	✓
⊼F	0 on B.			
31	38° 8'			
32	21° 51'			
33	19° 37'			✓
34	24° 27'			✓
35	46° 38'			
36	45° 28'			
37	44° 11'			
38	39° 51'			
39	38° 5'			
40	36° 23'			
41	31° 30'			
42	30° 4'			
43	27° 30'			
16	17° 28'			✓
E	100° 40'			
D	71° 56' 71° 54'	.73 .985	9° 45'	

(4.a.)



☆ E	O on F
B	51° 57'
B	6° 0'
31	7° 56'
32	2° 33'
34	6° 29'
33.	5° 2'
35	20° 39'
36	20° 20'
37	19° 58'
38	16° 39'
39	16° 11'
40	12° 13'
41	10° 19'
42	12° 36'
43	11° 41'
44	10° 48'
29	38° 49'
30	47° 49'
25	47° 22'
21	47° 35' (visible from E.)
D	83° 12'

✝ D.	O on A	
*25	9°42'	(visible) (recheck on C)
27	19°27'	(visible) (5' diff.) (check)
23	~0°58'	
29	35° 4'	
✝ C	O on A.	
25	93°42'	(recheck)
27	95°15'	(checks exactly)
24	100°33'	(checks exactly)
23	92°45'	(diff 7' - very short shot)
✝ D	O on A	
C	21° 8'	(checks exactly)
F	66°46'	
B	27°50'	(checks within 3')
E	82°49'	
~~E~~		
✝ E	O on B	
F	51°58'	

* no. 25 - This shot taken on standing wall about 15 from true corner. Ergo does not check. See Linton's measurements.

☆	A	0 on B
	C	83° 26'
	4	51° 52'
	3	44° 3'
	2	38° 49'
	1	32° 13'
	14	22° 59'
	15	27° 57'
	15	19° 11'
	16	18° 45'
☆	B	0 on A.
	F	157° 5'
	E	129° 43'
	4	57° 40'
	3	62° 36'
	2	67° 20'
	1	75° 32'
	45	83° 27'
	14	96° 23'
	15	109° 46'
	16	114° 31'
☆	F	0 on B.
	34	24° 28'
	46	26° 8'
	47	26° 27'
	48	37° 35'

49	30° 52'	
50	26° 33'	
[illegible]	27° 17'	(corrected ∠ of walls.)
[illegible]	28° 8'	(∠ of plinths approx for check)
40	36° 25'	
E	100° 41'	✓
E	0 on B.	
F	51° 57'	✓
48	11° 5'	
49	8° 44'	
[illegible]	11° 1'	∠ of plinths
33	5° 2'	
34	6° 32'	
46	5° 33'	
47	6° 53'	
50	9° 12'	
[illegible]	10° 44'	∠ of walls
40	12° 11'	
29	38° 49'	

9.

	Rod.	
0	.30	
4	.37	
3.	.33	
1	.27	
	27	(plinth infront of pt. 15)
19	.93	
10	.90	

J-29 4/ /36

Leveling
Facade.

	Horiz ∠	Stadia	Vert ∠
⛫ △ 1	0 on B_1	.600 .920	13° 17'
△ A_1	115° 6'	1.00 1.304	5° 32'
⛫ △ A	0 on B_1		
B_1	0° 0'	1.00 1.534 1.536	11° 5'
△ 1	L 32° 24'	1.00 1.310	6° 18'
⊙ 1	R 3° 37'		
⊙ 2	R 16° 34'		
⊙ 3	R 12° 9'		
⛫ △ 1	0 on A_1		
⊙ 1	L 56° 32'		
⊙ 2	L 42° 23'		
⊙ 3	L 81° 59½'		
⛫ △ B_1			
	0 on 1		
A_1	32° 30'		

Court 2.

⊼ △ B_1	0 on B_1	
△ A	0° 0'	
△ X	39° 50' / 39° 49'	39° 49' 30"

Magnetic Bearing — N. 79° 22' E.
N. 79° 24' E.

⊼ △ X	0 on B_1			
△ Z	63° 22'			
Polaris at lower culmination	Vert ∠ 16° 13'	Reversed reading 84° 37'	Horiz ∠	Time

⊼ △ X	0 on B_1		
Polaris at eastern Elongation	Horiz ∠ 86° 18'	Reversed reading 86° 15'	Time. 4:20 - 4.40
⊼	86° 18'		

Pt. △ X = on rt corner of rear wall of J-21, Large stone placed on wall & marked by incised cross (X)
Pt △ Z = Incised cross on plinth stone J-9, in doorway.

Determination of latitude by observation on Polaris at lower culmination, 4/9/36, 9:41 P.M.

Determination of true North by observation of Polaris at eastern elongation, 4/10/36, 3:49 A.M.

J-4

J-4
⊼ pt. 81 on edge of plinth near corner.
0° on pt △1 of Court II (see p. 10)

~~△~~	Horiz ∠	Stadia	Vert ∠.
△1		1.90 1.50	0° 12' N. 82° 22' W.
d	122° 47'		
c	131° 17'		

J-4