10

Field Book

BARRETT DAM

W127

Index

See Page 34

3/9/20 Conveyor trestle from Tunnel to Rock Bins

Sta "P"	Grade Top 4x6 Stringers				
0+89.05		3.72	53.72		165.000
1+47	1648.84			7.51	45.71
1+37 ①	1649.33			6.99	46.23
1+32 ②	1649.81			6.44	46.78
1+31.50					
1+27 ③	1650.29			5.96	47.26
1+22 ④	1650.77			5.46	47.76
1+17 ⑤	1651.26			4.98	48.24
1+12 ⑥	1651.74			4.5	48.72
1+07 ⑦	1652.22				
1+02 ⑧	1652.70				
0+97 ⑨	1653.18			3.01	50.21
0+89.05		6.84	56.84		165.000
0+92 ⑩	1653.67			6.81	50.03

0+96.26 End of Tunnel on ℄ Plant

+ 0.964 ft = 0.964 per ft

1+42 1

Top Bins 1654.67

14.72
9.39
151.39

Center Line of Belt = 0.92 North of "P" line
D.S.T. between 6x6 Post Inside = 2'-6" = 2.5'

Base = 1'-2" = 1.17 on each Side to Batter.

All stations = ℄ of Bent Section

1.92 1651.92 1650.00

1+12 51.74 51.74 .18 51.74

3/11/20 Seepage 11 for Ele Footings

Sta	Grade Top 4x6 Stringers				
			16.5684		
0+89.25 P.O.T.					
0+87 (11)	1654.15			680	5004
0+85 (12)	1654.63			10.97	45.87
T.P. 15	15	119	4535	1768	44.16
0+67 (13)	1656.08				28.67
25					
0+42 (14)	1658.49				28.23
P.O.T. 0+32.62					
0+27 (15)	1659.93				27.83
0+12 (16)	1661.38				17.92
0-2.07 (17)	1662.74 Top 4x6 Str. / 1661.99 Top Post / 61.30				06.10
℄ Pulley 0-6.74	1663.19 = Top 4x6 Str. Produced				
0-9.79 = ℄ Bins					
0-11.74 (18)	(1662.64) = Top 8x8 Cap Str. / 1661.97 = Top of Post / 61.30				00.49
P.O.T.					1596.94

Level

0+82 = 1st Batter Bent

2

0-9.79

15'

0+89.08

.92

1+32

0+6.74 ℄ Pulley 1663.19

0-9.79 ℄ Bins.

H.I 45.35
11.38 TPR
33.97
1.41
35.38 H.I.
9.03
26.35
26.33
9.03
3536 H.I.
6.13
29.73 TP No 11
4.42
33.65 H.I.
582
27.83 T.P.
56
28.39 H.I.
3365
582
2783
10.47
17.92 P.P.
96
18.88 H.I.
12.63
06.25 P.P.
2.27
08.52 H.I.
8.03

3365
4.58
2867

3365
5.42
2783

18.88
12.78
06.10

08.52
1.58
96
94

6.74
4.67
2.07

3/11/20

Elevation Top of Rock Bins

Bub
Fisher

"P Line" 0+89.08		4.99	1654.99	1650.00
West			3.13	1651.86
℄			3.11	1651.88
East			3.12	1651.87
Top of Bin			0.69	1654.30

Reference Points
Conveyor to Bins

0+89 08		6.71	1656.71		1650.00	
BM Nail in 2"x8"	North Side Tunnel Entrance			5.74	1650.97	
0+92 Right				2.65	54.06	Bent 10 — 9.56 out
0+92 Left				6.65	50.06	" 7.12 "
0+87 Left				8.99	47.72	" 11 — 6.98 "
0+87 Right				4.27	52.44	" 9.17 "
0+82 Right				5.57	51.14	" 12 — 9.46 "
0+82 Left				12.59	44.12	" 10.55 "
0+67 Right					28.79	" 13 — 8.72 "
0+67 Left					28.29	" 8.82 "
0+42 Right					28.31	" 14 — 9.20
0+42 Left					28.18	" " 9.25
0+27 Right					27.87	15 — 9.51
0+27 Left					28.79	" 9.60
0+12 Right					20.42	16 — 11.00
0+12 Left					17.43	" 14.50 "

Reference Point
Conveyor To Rock Bins

0-2.07	Right		Bent # 17		out
0-2.07	Left	1608.75		16.12	
0-11.74	Right		" # 18		
0-11.74	Left	1600.23		17.54	"

Layout of Bulkhead for

"P" 0+89.25 9.23 1659.23 165000

Occupy Bulkhead 0+12 - Sight 0+70 for 25°-

	chord				
0+24	12'	5°-0			
0+82					

Occupy Bulkhead 0+24 Sight 0+70 for 20°-

0+24	1660	1.43	57.80	F 2.2
0+36	1660	8.03	51 20	F 8.8
0+48	1660	9 36	~~49~~ 49.87	F.10 1.3
0+60	1660	10.46	48.77	F 11.23
0+72	1660			

3/13/20
Bob Fisher

South - Cement Conveyor from Cement House to Concrete Mixers.

0.0 = South Edge of Cement House

Bent #1
0-025 Hub

#2 Hub
Bent 0+15.25

P.O.T. Hub
0+24.66

Bent #3
0+30.25

Bent #4 P.O.T.
0+45.25

P.O.T. Nail
0+49.55

℄ Mixing Plant
0+57.06 Hub

5.09 Left to outside 12x12 Post
West Line of Mixer Plant.

3/13/20
Bub
Fisher

Profile Conveyor – South from Cement House to Mixing Plant.

Conveyor – Stock pile to Rock Bins						
0+27 Hub	2.50	1630.33		1627.83		
Floor Cement House			9.32	21.01		
Bent #1						
0+0.25 Hub			14.82	15.51		
0+07			14.50	15.83		
Bent #2 Hub						
0+15.25			9.57	20.76		
P.O.T. Hub						
0+24.66			8.90	21.43		
Bent #3						
0+30.25			8.62	21.71		
0+15.25 TP	0.31	1621.07	9.57	1620.76		
P.O.R. #4						
0+45.25			10.36	10.71		
@ Mixing Plant Hub.						
0+57.06			12.41	08.66		
Top Cement Floor			1.52	19.55	-17	(19.21)

3/14/20
Bud Fisher

Bents - Conveyor from Cement House to Bins

0+30.25 Sta = 00 = South Side C.H.

Grade top 4x6 str 3.86 1625.57 1621.71

Level through Cement House

300' Vert. Curve

Bent A-1
0-6 69 P.C. 23.07

Bent #1 (23.07)
0+.25 P.I. 23.17 2.40

B. #2
0+6.69 P.T. 23.49

B#3
0+21.69 24.46

B#4
0+36.69 25.43

B #5
0+55.05 ———

0+58.80 E. Pulley 27.30 = T. Pulley
0+59.80 E. Chute

B#6
0+63.05 24.90 Top Post

Rolls = 5" Dia.

6.473 %

See Page 33 for Stationing & Grades.

3/14/-20
Bud Fisher

Reference Points
Conveyor Cement House to Bins

0+30.25		3.86	1625.57		1621.71
00+0.25	Right			606	1951
	Left			606	19.51
B 2 0+06.69				10.47	15.10
0+8.3 21.69	Right				23.62
	Left				12.89
℄ line 0+21.69				4.45	21.12
0+2169	Left			10.08	1549
0+21.69	Right			4.45	21.12
8-4 ℄ 0+36.69				8.47	17.10
	Right				17.45
	Left				
T.P.		1.35	15.18	11.74	13.83
0+51.69				6.61	08.57
	Right			0.74	14.44
	Left			8.31	06.87
0+62.50				7.43	08.31
	Right				

Bent #1	1.78	out	
	1.78	"	
Bent #3			
"	2.66	out	10' out RP
"	1.72	"	10' out RP
Bent #4	2.50	out	
Bent #5			
	2.99	out	+ on Rock
	4.25	out	+ on Rock
Bent 6	3.56	out	+ on Rock

Cont from Page V

3/16/20 Grades on Footings Conveyed from Stock Pile To Bins

Bub Fisher. Grades Top 4×6 Str. BM Nail in 2×8									
North side Tunnel		0.84	1651.81		1650.97				
North (B11)									
0+87.0	1654.15			6.36	45.45	8.70'	2.6 v	8.8 v	8'-9 3/4"
South									
0+87.0	1654.15			6.40	45.41	8.69'	v 6 v	8.8099	8'-9 3/4"
North (B12)									
0+82°	54.63			7.95	43.86	10.77	2.97	10.92	10'-11"
South									
0+82	54.63			8.35	43.46	11.17	3.03	11.324	11'-3 7/8"
Swiger old Blathenwick Stope. Plank									
TP Nail.		3.70	1632.93		1629.23				
North (B13)									
0+67	1656.08			4.55	28.38	27.70	5.79	28.082	28'-1"
South									
0+67	1656.08			4.93	28.00	28.08	5.85	28.467	28'-5 5/8"
North (B14)									
0+42	58.49			5.41	27.52	30.97	6.33	31.398	31'-4 3/4"
South									
0+42	58.49			5.61	27.32	31.17	6.37	31.600	31'-7 1/4"
North (B15)									
0+27	59.93			5.58	27.35	3v.58	6.60	33.030	33'-0 3/8"
South									
0+27	59.93			5.98	26.95	3v.98	6.67	33.435	33'-5 1/4"
							10.77		
North (B16)									
0+12	61.38			12.54	20.39	40.99	8.00	41.555	41'-6 3/4"
~~0+12~~									
T.P.		0.43	21.49	11.87	21.06				
				3.56	17.93				
South (B16)									
0+12	61.38			12.24	09.25	52.13	9.86	52.829	52'-10"

1.17 Base on all Bents except (17) & (18)

1.25 Base on (17) & (18)

Dist / Vert height out / Slope Dist

Footing Grades Conveyor Tunnel to Bins.

	Top of 4x6 Str				
0-11.74 (B 18) ℄		5.09	1605.58 ✓		1600.49
South B17 0-2.07	Top Post 61.97			3.84	01.74
South. (B18) 0-11.74	Top Post 61.97			5.02	00.56

Vert. Height.	Dist out to Inside Post	Slope Dist	
60.73	11.29	61.061	61'-0 3/4"
61.41	11.48	62.257	62'-3"

Bob Fisher

Layout of Bulkhead for Crushed Rock Storage.

10' Chords

occupy 0-0 sight

10'	4° - 10' - 1667	
20	8° - 20' - 333	
30	12° - 30' - 500	
40	16 - 40' - 667	
50	20 - 50' - 834	
60	25 - 000	
70	29 - 10' - 167	
80	33 - 20' - 334	
90	37 - 30' - 500	
100	41 - 40' - 667	
1+14	45 - 50' - 834	
1+20	50 - 000	

Grade Top of Bulkhead = 1660 —

3/27/ Grades School House

Johnsons flag set on 175 Contour = El 1621

Johnsons Flag	35	1624.50		1621.00
	10.6	27.35	17.75	1611.75
	5.50	25.80	2.05	20.30
	3.1	24.1		1621.0

Points on Chain 2

00 = End Water Spout

0-1.63 - Head of Nail in 12x12

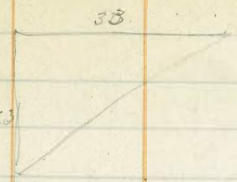
0+5 61/14.38 Hub.

0+19 99/13 16 Hub

0+33 15/28.99 Hub.

0+61 14/14 50 Hub.

0+76 64/ Nail in Rock



33
23
99
16
2159
379

380
20
15.20
25
170
156

725
163
561

19
9.99
2899

3/29/20 Road from Barrett Th Lyons Bub Cham. Valley & East to Salazars

Fisher	Dist.	Δs L	Δ Rt.
#8 Δ R.			
#8 Δ L=00		51°27'	
1			
2			
3			
4			
5			
6			
7			
7+50			
8			
900 Δ Rt			13°08'
10			
11			
11+80 Δ Rt			49°53'
12+80			
13+80 L Lt		41°35	
14+80 L Rt			47°0'
15+23 L Rt.			60°-15'
16			
17			
17+33 L Lt		31°40'	
18			
18+40 Rt Rft to Road to Salazar.			
18+80 L Rt			27°12'

℄ Road

1.5 Rt
1.0 "
2.0 "
2 Left
5 "
3 Right
2 Right
9 Left
8' "
℄
50 Lt
57 Lt
7 Rt
3' Lt
55 Lt
5 Rt
8 Rt.
2 Lt
30 Rt
45 Lt
℄
℄
5' Rt

Road Barrett-Loyons Valley
Sola 3 wS.

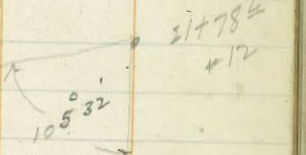
Sta	Chain Dist.	Ls Lt	Ls Rt
19+00			
19+50			
19+75			
20+00			
20+40			
20+70 L Rt			20° 56'
21			
21+78 L Lt = #12 on House Survey		95° 22'	
22			
23			
24 L Rt			32° 48'
24+50			
25			
25+35 L Rt			90° 09'
25+75			
26+35			
27+17 L Lt		53° 23'	
28			
29			
29+20 L Lt		58° 28'	
29+56 L Lt		50° 09'	
30			
31 L Rt			28° 10'

Curve 11 Wide

1.5 Rt.
2 Lt.
2 Rt.
100 R
6.0 Lt
E
1 Rt.
18' Lt
12' Lt
9.5 Lt
E
3.5 Lt
8 Lt
11 Rt.
6 Lt
4 Rt
5 Lt.
2 Lt
3 Rt
5 Lt
7 Lt
15 Lt
3. Rt

21+25 = 4 Rt.

24+85 - 10 Lt



#11 = 06

Road Barrett Lyons Valley

Sta	Dist	Ls Lt	Ls Rt.	Dist to E Road
31+65				8 Lt.
32				3.5 Lt.
32+45 Lt.		24° 26'		℄
33				7 Lt.
33+50				10.5 Lt.
34				1 Lt.
34+48 Lt.	End.			7 Lt.

18+40 P.T. Lyons Valley R.				
18+40 Δ Rt.			30° 24'	℄
19+40				℄
20+40				2 Lt.
20+50 Rt.			45° 39'	℄
21				13 Lt.
21+50				11 Lt.
22				3.5 Lt.
22+50				4 Rt.
23				10 Rt.
23+50				9 Rt.
24				8 Rt.

3/29/20. Road To Salazar

Sta	Dist	Ls Lt	Ls Rt	Dist to ℄ Road
24+50				9 Rt
25				9 Rt
25+50				7 Rt Intesl Junction Road to Barn
26				℄ 8' Rd to Barns
26+50				4 Lt
27				5 Rt
27+26 Lt		78°-11'	✓	6 Lt
27+89 63 Lt		79°30'		9 Lt
28				℄
28+50				3 Rt.
29				25 Lt
29+50				2' Lt
30				℄
30+20 Lt Rt			59°33'	7 Rt.
30+70				9 Lt
31 Lt Rt			60°33'	6 Rt.
31+50				9 Lt.
32				7 Lt
32+50				7' Rt.
33 Lt		44°33'		1 Lt
33+50				7' Rt
34				35 Lt
34+50				17.5 Lt
35				15' Lt
35+50				6' Lt.

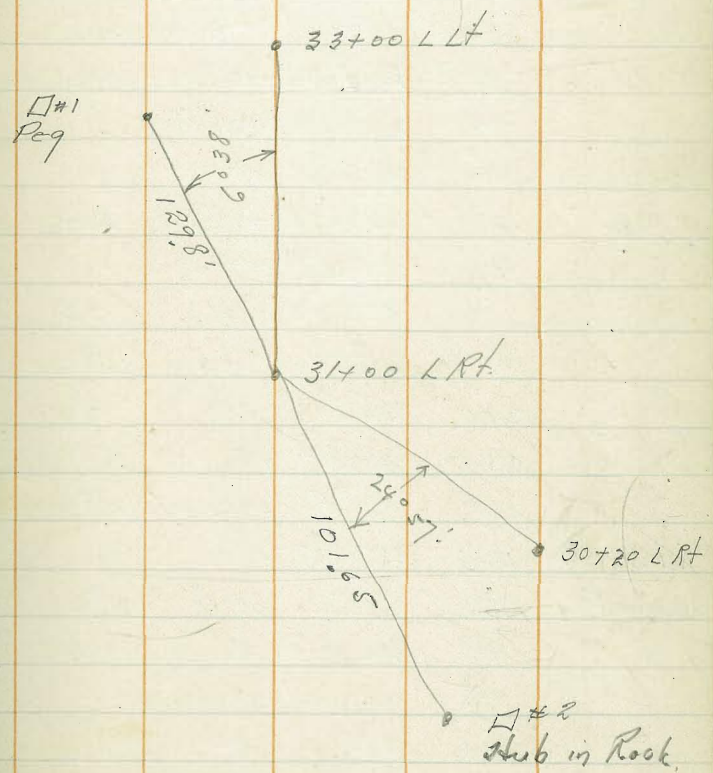
3/29/20. Road Barrett – Salazar

Sta	Dist.	Ls Lt	Ls Rt	Dist to ℄ Road
36+00				10 Lt
36+50 =	W. side Conc Bridge			3' Lt
36+72 =	E Side " "			℄
36+95				℄
37+10		Lt. 41°54'		7 Lt
38				5' Rt
38+90			Rt	33.0 Rt
39				14' Rt
39+50				5 Rt.
40				℄
40+50				℄
41				℄
41+32	Nailing Bridge	Wilson Creek		6' Lt

Topog Sand Storage Site #2

Johnsons Flag	#10	25.10		1671.00
Peg	0.77	10.89	14.98	10.12
Rock	-.05	95.83	15.01	95.88
Peg	3.82	84.51	15.14	80.69
30+20 L Rt Road hub			8.40	76.11
31 L Rt			11.00	1573.51
TP Nail	0.82	70.33	15.00	69.51
□ #1			2.43	67.90
Nail Edge Rd Rt	2.26	60.50	12.09	58.24
33+00 L Lt			9.13	51.37

30+20 hub	12.27	1588.38		1576.11
TP Point of Rock	15.68	1602.99	1.07	87.31
□ #2			4.45	98.54
27+89			2.67	1600.32



3/30/20 Topog Sand Storage #2

Sta	Stadia Dist.	Az	Vert ∠	Rod	Elc	Corrected Dist	Diff in Elevation
H.I. = 4.5 (7240)		At □ #1			1567.90 ✓		
	Sight	Sta 31+00 ∠ Rt. Salazar Road					
	for	Zero Az Rt.					
R.	66.0	189.30	00	16.0	56.4	66	✓
Rt Edge	68.0	192°-30	-2°56'	10.0	50.8	66	116 − 17.1 ✓ ✓
R	80.0	156°-	+1°30'	4.5	70.0	80	+2.1 ✓ ✓
Ed. Rd.	71.	205°-30'	-17-30	4.5	57.9	68	−15.0 ✓
R	84	225°-50.	-17-50	4.5	43.5	80	−24.4 ✓
R.	90	232-35	-18-47	4.5	40.4	85	−27.5 ✓
Ø Draw.	105	237-55	-20°-30	4.5	33.5	97	−34.4 ✓
R	117	245-55	-14°0	4.5	40.4	110	−27.5 ✓
R	147	253-45	00	17.7	54.7	147	−17.7
R	177	258-20	00	5.9	66.5	177	−5.9
R	210	269	+4°	4.5	82.5	209	+14.6 ✓ ✓
R	240	269-50	+5°30	10.0	85.7	237	+22.8
R	177	274-45	+2°-51	4.5	76.7	177	+8.8 ✓
Rd	140	283-55	-1°-	4.5	65.5	140	−2.4 ✓
Main Ø	97	258-5	-17-18	4.5	40.4	88	−20.5
" "	94	272-35	-12-10	10.0	43.4	88	−19.0
" "	96	281-0	-17-0	4.5	48.4	92	−19.5 ✓
" "	104	294-15	-7-30	"	54.5	104	−13.4 ✓
" "	143	295	-8-0	"	57.3	147	−10.6 ✓
" "	120	316-30	-2-55	"	61.8	120	−6.1 ✓
	11	325-45	+0-15	10	62.8 ✓	11	+0.4 ✓

platted

H-45

72.40

At Δ #1 Sight 3.100

(567.20)

						Corrected Dist.	Diff in Ele.
Bottom M. Draw	128	341-10	+1°56'	100	66.7 ✓	128	+4.3 ✓
Ed Rd. " "	150	348	+3°40	14.0	68.1 ✓	150	+7.7 ✓
" "	171	353-30	+1°-30'	4.5	72.4	171	+4.5 ✓
R. Ed Rd.	127	0°-40	00	+1.0	73.40	127	
" " "	122	355-15	+2°-53'	4.5	74.0	122	+6.1 ✓
Rdg	115	351-30	+2-43'	"	73.3	115	+5.4 ✓
" Rdg	86	344-30	00	3.7	68.7	86	
"	84	314-40	00	8.9	63.5	84	
"	112	301-10	00	11.4	61.0	112	
"	90	282	-8-30	10.0	48 ✓	88	-13.2 ✓
"	85	285-20	-8-55	4.5	54.9	83	-13.0 ✓
"	77	305-	00	14.0	58.4	77	
"	65	323-10	00	9.3	63.1	65	
"	80	348	00	4.0	68.4	80	
Ed R. "	95	5-15	00	1.1	71.3	95	
Eq R.	112	2°-40'	00	0.4	72.0	112	
Draw ~~ER~~	55	13°-20	00	7.2	65.2	55	
" ER.	53	7-50	00	6.1	66.3	53	
" ER.	50	353-30	00	6.0	66.4	50	
Draw	51	344-45	00	10.2	62.2	51	
"	38	316-45	00	14.3	58.1	38	
"	48	287-10	-19-38	4.5	57.7	43	-15.2 ✓
"	60	263	-15-50	10.0	46.6	56	-15.8 ✓
"	85	250	-15-36	10.0	40.4	79	-22.0 ✓

✓

Stadia

#145
T 240

A.T. □ #1

156790

						Corrected Dist	Diff in Elev.
Point	88	256-25	-16°-55	45	43.5	81	-24.4
Rd.	58	250-35	-15°-8'	100	47.8	54	-14.6
"	43	251-30	-19°-27'	45	54.5	38	-13.4
" Eg Rd.	33	239-10	00	136	588	33	
N. Eg Rd.	25	222-30	00	142	582	25	
Rg	23	210-30	00	8.6	638	23	
"	35	153-40	+7-30	45	77.4	34	+ 4.5
Rg.	53	145-15	+7°-13	45	74.5	52	+ 6.6
"	75	140-30	+11°-24	100	76.9	72	+ 14.5
Point Rg.	77	116-30	+13°-55'	45	85.9	73	+ 18.0
"	46	105-	+15-30	45	79.7	43	+ 11.8
"	28	86-50	+16°-39'	45	75.5	26	+ 7.6
"	22	14°-55	00	4.5	67.9	22	
" Eg Rd	28	7°-20	00	8.8	63.6	28	
" "	40	349°	00	7.1	65.3	40	
Draw	71	29°-	+4°-6'	10.0	67.5	71	+ 5.1
"	87	52°-35'	+7°-45'	10.0	73.0	85	+ 11.6
"	105	52-30	+7°-5'	4.5	80.7	103	+ 12.8
"	125	50-15	+10°-2'	10.0	83.9	121	+ 21.5
"	143	53-55	+8-30	4.5	88.7	139	+ 20.8
"	156	56-30	+9-10	4.5	92.4	152	+ 24.5
Junction " Draw	166	58-45	+10-12	4.5	96.7	161	+ 28.8
R Hand "	180	64-45	+13-20	10.0	1602.7	170	+ 40.3
" "	196	69°	+12°-38	4.5	1609.5	188	+ 41.6
" "	210	70-30	+13-8	4.5	1614.7	200	+ 46.8

Platted

Ht = 4.5
7246

At □ #1

Sta.	Sta. Dist.	Az.	Vert ∠		156790	Corrected Dist.	Diff in Elev.
School Bldg	SE Cor. 222'	73-20	+14.0	4.5	16.0	209	+52
Ridge	224	82-55	+13-22	4.5	18.1	210	+50.2
"	184	84-15	+13-10	4.5	08.4	174	+40.5
"	157	88-45	+15-7	10.0	07.0	146	+39.6
"	120	95-30	+15-56	10.0	93.9	111	+31.5
"	85	111-15	+14.00	4.5	87.9	83	+20.0
	115	85-15	+16-15	10.0	93.2	110	+30.8
	100	74-45	+12-0	4.5	88.2	96	+20.3
	80	67-15	+13-15	4.5	85.7	78	+17.8
	70	49-45	+5-50	4.5	75.0	69	+7.1
Left Hand Draw	187	56-47	+13-26	10.0	04.4	177	+42.0
"	214	56-00	+13-07	10.0	10.0	203	+47.6
	232	56-55	+12-33	4.5	16.9	220	+49.0

P.M. - continued.

4.6 7245

At □ #1 Sight 31+00 for 0.0 — 1567.90

Draw	253	56-29	+14-29	10.0	23.7	237	+61.2
Draw	272	55-25	+14-51	10.0	29.9	264	+67.4
Rg	265	48-28	+15-54	10.0	37.5	245	+70.0
Rg	237	49-23	+15-17	10.0	22.5	220	+60.0
"	204	51-00	+14-28	10.0	11.7	198	+49.2
"	194	49-04	+14-10	10.0	08.5	188	+46.0
"	171	48-08	+11-41	4.6	01.7	164	+33.8
"	151	43-09	+10-58	4.6	96.1	145	+28.2
	130	38-10	+9-37	4.6	89.3	126	+21.4

Platted

HI = 4.6

72.50

1567.90

Station	Stadia Dist	Az	Vert ∠	Rod	Elev.
Ridge	113	41-28	+9-27	4.6	86.2
"	100	26-20	+6-42	4.6	79.7
"	89	9-24	+3-26	4.6	73.2
E of Road	87	7-21	0 0	2.9	69.6
Ridge	124	5-00	+6-37	4.6	82.1
"	137	6-56	+8-03	4.6	86.9
	152	22-14	+9-30	4.6	92.6
	171	30-28	+13-06	10.0	01.5
	201	36-33	+14-19	10.0	10.3
	227	40-15	+13-37	4.6	19.7
	252	45-19	+~~14~~ 13-32	4.6	28.9
(?)	~~268~~ +68	39-36	+15-46	10.0	32.5 065
	240	35-44	+13-26	4.6	21.9
	223	30-41	+12-35	4.6	15.4
	210	25-13	+11-35	4.6	09.3
	201	21-31	+12-15	10.0	04.0
	188	17-24	+10-50	10.0	97.5
	175	12-06	+8-34	4.6	93.6
	173	7-57	+8-07	4.6	92.1
Draw	176	6-57	+8-37	10.0	88.5
Draw	168	8-54	+8-22	10.0	86.7
Draw -	167	12-48	+9-24	10.0	89.3
Pt of Ridge	183	7-32	+8-04	4.6	93.2
" " "	161	4-12	+6-58	4.6	89.6

Corrected Dist	Diff Elev.	
110	+18.3	✓
99	+11.8	✓
89	+5.3	✓
87		
123	+14.2	✓
134	+19.0	✓
148	+24.7	✓
168	+39.0	✓
189	+47.8	✓
215	+51.8	✓
236	+61.0	✓
250 156	+44.0 ✓	✓ +70.0
227	+54.0	✓
212	+47.5	✓
202	+41.4	✓
192	+41.5	✓
181	+35.0	✓
171	+25.7	✓
168	+24.2	✓
172	+26.0	✓
164	+24.2	✓
162	+26.8	✓
179	+25.3	✓
179	+31.7	

Plotted
4/13/78

HE 46
72.50

At ⊡ = 1

Station	Station Dist.	Az	Vert L	Rod	El. 1567.90	Corrected Dist	Diff in Elev.
Pt Ridge	180	3-40	+7-~~48~~ 48	10.0	86.7	177	+24.2 ✓
Draw	168	2-37	+6-56	10.0	82.7	165	+20.2 ✓
Draw	149	3-11	+6-56	10.0	80.3	147	+17.8 ✓
Draw	167	345-22	+4-06	10.0	74.4	166	+11.9 ✓
Draw	153	340-51	+3-15	10.0	71.2	153	+8.7 ✓
Flat	146	333 09	+2-30	10.0	69.2	146	+6.7 ✓
Flat	142	320-22	-0.0	5.2	67.30	142	
Draw	~~144~~ 131	294 21	0.0	4.8	60.7	131	
Draw	147	294-55	00	7.0	65.5	147	+6.5
"	160	291-22	+2-16	10.0	69.0	160	
"	176	287-08	+3-29	10.0	73.1	176	+10.6 ✓
"	192	285-44	+3-01	4.6	78.0	192	+10.1 ✓
"	214	281-30	+4-36	4.6	85.1	214	+17.2 ✓
Top of Ridge	243	278-35	+5-29	4.6	91.1	240	+23.2 ✓
Top of Ridge	264	283-34	+5-48	4.6	94.4	261	+26.5 ✓
Top of Ridge	295	287-04	+7-20	10.0	99.8	291	+37.3 ✓
Top of Ridge	264	287-54	+6-22	4.6	96.9	260	+29.0 ✓
Ridge	250	287.45	+5-37	4.6	92.2	247	+24.3 ✓
"	226	285-0	+6-16	10.0	87.0	223	+29.5 ✓
"	203	28803	+3-20	4.6	79.1	203	+11.8 ✓
"	183	290 30	+1-56	4.6	74.1	183	+6.7 ✓
"	163	294 49	00	2.9	69.6	163	
"	184	297-07	+2-05	4.6	74.6	184	+6.7 ✓
"	208	295-55	+5-0~~5~~ 2	10.0	~~80.7~~	207	+18.2 ✓

✓

Platted

HI 4.6

7250

At D #1

Station	Stadia Dist.	AZ	Vert L	Rod	El 1567.80	Corrected Distance	Diff in Elev
Ridge	230	294-21	+4-38	4.6	86.4	228	+18.5
N Edge of Road	250	293 02	+6-01	4.6	93.9	246	+26.0
S ~~Edge~~ Road	270	293-09	+5-44	4.6	94.6	267	+26.7
Pt - Ridge	280	293-41	+6-53	4.6	01.1	277	+33.2
Point of Ridge	305	292-06	+7-36	4.6	07.9	301	+40.6
Edge of Road	305	290-~~39~~ 37	+6-14	4.6	00.8	301	+32.9
Ridge	302	298-20	+7-47	4.6	08.4	298	+40.5
Ridge	287	299-20	+8-09	4.6	08.1	280	+40.2
"	258	299-03	+6-14	4.6	95.7	255	+27.8
Edge of Road	250	299 22	+5-04	4.6	89.9	247	+22.8
"	228	301-11	+5-18	4.6	89.0	226	+21.1
~~Ridge~~	212	301-53	+3-54	4.6	82.3	211	+14.4
"	185	303-05	+2-24	4.6	75.5	185	+7.6
"	164	304-45	+2-53	10.0	70.7	164	+8.2
"	160	313-30	+1-00	4.6	70.7	160	+2.8
	183	312-15	+2-56	4.6	77.2	183	+9.3
Ed- Road	205	311-03	+5-00	4.6	85.7	204	+17.8
Edge Road	220	310 53	+4-34	4.6	85.3	219	+17.4
~~Ridge~~	235	309-30	+5-59	4.6	92.2	233	+24.3
	267	307-16	+7-35	4.6	02.7	264	+34.8
	303	304-18	+8-50	4.6	13.9	298	+46.0
	305	304-02	+8-45	~~4.6~~ 10	~~+38~~ 084	297	+45.9
	295	312-00	+9-02	4.6	13.6	287	+45.7
	277	312-19	+8-06	4.6	06.5	270	+38.6
	266	312-21	+8-10	4.6	05.3	260	+37.4

Stated

HI 4.6
72.50

At □ = 1

Station	Stadia Dist	Az	Vert ∠	Rod	El 1567.90	Corrected Distance	Diff in Elev
	222	313-44	+5-43	4.6	89.7	220	+21.8 ✓
edge of Road	212	314-35	+4-18	4.6	83.7	210	+15.8 ✓
" "	193	319-43	+4-13	4.6	82.0	192	+14.1 ✓
	180	321-0	+4-10	10.0	75.5	179	+13.0 ✓
	167	~~352-~~ 322-52	~~+3~~ -20	10.0	72.2	167	+9.7 ✓
	164	330-18	+3-26	10.0	72.3	164	+9.8 ✓
edge of Road	190	326-30	+5-16	10.0	79.9	188	+17.4 ✓
" "	204	325-30	+4-48	10.0	79.9	203	+17.4 ✓
" "	200	333-33	+4-18	10.0	77.5	199	+15.0 ✓
" "	180	334-33	+2-55	4.6	77.0	179	+9.1 ✓

pl attd
4/13/70

HI 485
1603.39

At □ 2 Sight sta 31 LRt for 9854
Zero Az Rt.

Rg	105	84-30	-6°-32	485	86.6	104	- 11.9 ✓
"	120	97-0	00	6.6	96.8		
"	140	104-30	+3°-12'	4.85	06.3	139	+ 7.5 ✓
"	143	106-35	+3°-8'	485	06.3	143	+ 7.8 ✓
"	152	107-40	+4°-15'	485	09.7	151	+ 11.2 ✓
Top Rg	162	110-15	+5°-32'	485	14.0	160	+ 15.5 ✓
	135	120-0'	+7-0	485	14.8	133	+ 16.3
	125	119-10	+4-49	4.85	09.0	124	+ 10.5 ✓
	120	118-45	+4-17	4.85	07.4	119	+ 8.9 ✓
	105	117-5	00	0.5	02.89 ✓		

#1 485
1603.39

						Corrected Distance	Diff in Elev.
		At □ #2			1598.54		
	82	108-15	00	98	93.6		
	70	92-10	00	16.5	86.9		
	72	80-0	-13-39	485	82.1	68	-16.4 ✓
							-1.43 ✓
Draw	52	64-10	-16-42	12.0	79.1	48	
"	63	90-30	-12-55	485	84.8	60	-13.7 ✓
"	65	101-05	00	14.6	88.8		
"	75	119-15	00	8.1	95.3		
"	96	131-35	+3-16	485	104.0	96	+5.5 ✓
"	104	142	+5-55	485	09.2	102 103	+10.7 ✓
Top Draw	127	155-10	+9-13	485	18.5	124	+20.0 ✓
Rg. S.b.D.	112	160	+10-08	485	17.9	109	+19.4 ✓
	88	155-45	+7-40	485	10.1	87	+11.6 ✓
	70	146-15	00	1.5	01.9		
	42	134-30	00	8.6	94.8		
	27	102-5	00	14.9	8.85		
Base Rk.	36	53.0	-33-35	485	82.2	25	-16.5 ✓
" "	33	85-15	-24-40	485	86.2	27	-12.5 ✓
B. Rock	22	103-30	00	14.5	88.9		
" "	17	124-20	00	10.5	92.9		
" "	7	176-	00	7.0	96.4		
	12	276-50	00	6.9	96.5		

✓

Plotted
4/13/10

7/9/20

#I 4.8

Station 1603.34

AT □ #2 Sight 31 L Rt

for Zero Az Rt. = 98.54

Station	Az	Vert ∠	Rod	Elev		
25	229-30	0 0	5 3	98.0		
49.0	202-30	0 0	2 2	01.1		
58.0	190-15	+7-32	4 8	06.0	57	+ 7.5 ✓
81.0	182-34	+10-35	4 8	13.1	78	+ 14.6 ✓
103	205-44	+10-31	4 8	16.9	101 99	+ 18.4 ✓
						+ 15.6 ✓
82	215-0	+11-17	10.0	08.9	79	
59	231-0	+8-22	10.0	01.6	58	+ 8.3 ✓
51	252-35	0 0	6 6	96.7		
66	252-47	0.0	13 3	90.0		
Pt of Rock 41	292-15	0 0	7.8	95.5		
end R. Ridge 54	294-28	0.0	11.4	91.9		
Bott Rock 47	313-37	-12-07	10.0	83.7	45	- 9.6 ✓
" " 33	350-15	-22.06	10-0	81.8	28	- 11.5 ✓
38	350-15		Sum Elev	81.8		
Top of Bldr 42	351-09	-18'-36	4.8	85.8	38	- 12.7 ✓
Bott - Main Draw 58	345-0	-17-05	10 8	77.0	53	- 16.3 ✓
Top Bould 58	341-45	-15-16	4 8	83.8	54	- 14.7 ✓
Bott Draw 55	332-39	-16-19	10.0	78.5	50	- 14.8 ✓
" " 60	325-10	-9-30	10 0	83.5	58	- 9.8 ✓
" " 63	313-09	-8-25	10 0	84.7 ✓	63	- 9.1 ✓
Top of Bldr 50	323-09	-4-20	10.0	89.5	50	- 3.8 ✓
Bot Draw 67	303-30	-6-51	10.0	85.4	66	- 7.9 ✓

Plotted 7/13/20

4.8

160334 At A2 98.54

						Corrected Dist.	Diff in Elev.	
Bott. Draw	73	284-54	0-0	15.8	87.5	73		
"	102	276-20	0 0	13.6	89.7	102		
" "	108	270-20	0 0	10 8	92.5	108		
" "	122	261-24	0 0	9.1	94 2	122		
" "	137	256-06	+2-32	10,0	99.4	137	+6.1	✓
" "	154	252-56	+4-05	12-0	01.2	154 153	+10.9	
" "	184	248-45	+4-48	14-0	04.5	183	+15.2	✓
" "	220	251-30	+4-15	10,0	09.5	219	+16.2	✓
side hill	237	247-27	+5-30	4.8	21.1	236 235	+22.6	
" "	253	243-10	+7-46	4,8	32.4	250 249	+33.9	✓
	235	238-08	+8-12	4.8	31.6	230	+33.1	✓
	215	243-12	+7-04	10-0	19.5	211	+26.2	✓
	206	245-48	+6-26	14-0	12.1	204	+22 8	
	176	243-39	+7-10	14-0	11.0	174 173	+21.7	✓
	141	248-15	+4-58	10-0	05.4	140	+12.1	✓
	144	~~248-30~~ 238-30	+9-16	10.0	16.1	139 140	+22.8	
	150	229-15	+12-09	10 0	24.1	143	+30.8	✓
	142	220-47	+11-16	4.8	25.6	136	+27.1	✓
	121	226-30	+12-25	10.0	18.7	116	+25.4	✓
	112	235-45	+8-39	4.8	15.1	109	+16.6	✓
Ridge	102	245-45	+7-23	10 2	06.3	100	+13.0	✓
"	97	251-45	+2-07	4.8	02.1	97	+3.6	
"	97	262-50	0-0	3.7	99.6	97		
	98	264-30	0 0	9.1	94.2	98		

Plotted 4/13/20

4.8

						Corrected Distance	Diff in Elev.	
160334	A □ 2				98.54			
Top of Ridge	113	251-45	+4-50	4.8	08.0	112	+9.5 +8.6	✓ ✓
	115	252-0	+4-19	10.0	01.9	114	+7.1	✓
	111	255-0	+3-37	10.0	00.4	111		
	76	313-20	00	13.9	89.4			
	100	315-10	00	7.1	96.2			✓
	120	311-40	+2-46	4.8	04.3	120	+5.8	✓
	151	308-50	+5-29	4.8	12.8	150	+14.3	✓
	157	307-04	+6-56	4.8	17.3	155	+18.8	✓
	182	302-40	+8-20	4.8	24.6	178	+26.1	✓
	178	298-55	+8-50	4.8	25.4	174	+26.9	✓
	163	298-0	+8-12	4.8	21.5	160 159	+23.0	✓
	144	297-0	+6-46	4.8	15.3	142	+16.8	✓
	128	295-05	+4-51	4.8	09.3	127	+10.8	✓
	111	294-30	+4-45	4.8	07.7	110	+9.2	✓
	94	291-30	000	6.7	96.6	94		
	94	304-30	0-0	7.3	96.0	94		
Draw	126	276-40	0 0	6.7	96.6	126		
"	130	282 30	+2-39 ~~+2-28~~	4.8	04.5	130	+6.0	✓
"	144	284.45	+4-39	4.8	10.1	143	+11.6	✓
"	160	285-30	+6-29	4.8	16.4	157	+17.9	
	178	287-35	+8-14	4.8	23.7	174	+25.2	✓
	190	281 33	+8-19	4.8	25.7	186	+27.2	
	204	275-40	+8-28	4.8	28.3	199	+29.8	✓

Continued on Page 37

✓

Plotted 4/13/w

4/3/20.

Conveyor #3 - Cement House to Mixer Plant.

Bob - Fisher

5ta

	Grades		
	Top H×6		
00 = South Line Cement House.		Level	
Bent A1	23.82 Top Belt		
0 − 6 22	23.07 Top 4×6	P.C.	X
(−6.44)			
B #1	(2387) − 2392 Top Belt		
0+01 7	23.17 Top 4×6	P.I.	X M.O = 01
(6.44)			
B #2			
0+6 61	23.51 Top 4×6	P.T.	X
(15)			
B #3			
0+21 61	24.55 Top 4×6		X
(15)			
B #4			
0+36 61	25.59 Top 4×6		X 6.808.9
(922)			
B #5			
0+45 83	26.22 Top 4×6		
(922)			
B #6	(26.86)		
0+55 05	25.67 Top 6×6 Post		X
(8)			
0+58 80 ℄ Pulley	27.87 Top Belt		Level
#7			
0+63 05	25.67 Top 6×6 Post.		X

Grades for footings
Conveyor – from Cement House to Mixing Bin
Grade = Top of 4X6 Post.

0+57.0C ℄ Plant		13.81	1622.47		16 05.66			
Bolt-Brace (BM) NW Cor Mixing Plant				10.16	1612.31			
Bolt in Brace NW Cor Mixing Plant P.O.T. 0+26 61 East		9.47	1621.78		1612.31			
0+36 61 Bent # 4 West	25.59			7.44		11.25	3.05	set Hub 2.05
				7.26		11.07	3.01	set Nail 2.01
Bolt in Brace NW Cor.		8.10	1620.4		1612,31			
Bent # 3 East 0+21 61 West	24.55			2.96		7.10	2.35	Set Hub 1.35
				2,94		7.08	2.35	" " 1.35
Bolt in Brace NW Cor.		8.79	1621.10		1612,31			
Bent # 2 East 0+6 61	23,51			9.98		12.39	3.23	Set nail in Plank 2.23
0+6. 61 Bolt NW Cor M. Plant		6.62	18.93	5.42	1612,31	7,83	2.47	Nail in Rock 1.47
Bent # 5 East 0+45.83 Bent # 5 West	26.22			8.09		15.38	3.73	2.73
				5,57		12.86	3,31	Hub with nail 2,31
# 6 0+55.05 # 6 West	25.67							
	25,67							

Dist 1.17 Base on all Bents
6:1 Slope.
Dist Slope 1.25 Last 2 bents – 6+7 –

8/16/20
Fisher
Mixter. Elev- 1461- at Sand
Storage Site #2. Az R

At □ #1 Sight □ #2 for 0.0

□ #V		4.8	72.70	67.90
	Stadia Dist			
	45.0	349-0	11.7	14.61.9
	88.0	318-25	11.7	
	125.0	316-0	11.7	
	123-0	297-10	11.7	
	200.0	264-0	11.7	
	24.5	295-15	11.7	
	10 0	286-30	11.7	
	73-0	185-30	11.7	

7/4/20
Bob Fisher.

Grades on Footings Conveyor Cement House to Mixing Plant.

1.17 out = Base on all Bents except last 2
1.25 out = Base on #6 & #7 Bents. Butter 6:1

						Vertical Height	Dist Out.	Slope Dist
℄ Mixing Plant 0+57.06		13.22	1621.88		1608.66			
Bent # 3 East 0+21.61	Top 4X6 24.55			4.40	17.48	7.07	2.35	7-2"
Bent # 3 West.				4.48	17.40	7.15	2.36	7-3"
B#2 East 0+6.61	Top 4X6 23.51			10.76	11.12	12.39	3.23	12-6 3/4"
B#2 West.				5.81	16.07	7.44	2.41	7-6 1/2"
B#4 East 0+36.61	Top 4X6 25.59			7.43	14.45	11.14	3.03	11-3 1/2"
B4 West				6.82	15.06	10.53	2.93	10 8 1/8"
B#5 East 0+45.83	26.22 Top 4X6			7.87	14.01	12.21	3.20	12-4 1/2"
B 5 West				7.88	14.00	12.22	3.20	12'-4 5/8
B#6 East 0+55.05	Top 6X6 Post 25.67			2.47	19.41	6.26	2.29	6'-4 1/8"
B#6 West	25.67			2.49	19.39	6.28	2.29	6'-4 3/8"
B#7 East 0+63.05	Top 6X6 25.67			7.88	14.00	11.67	3.19	11'-10"
B#7 West 0+63.05								
℄ Mixing Plant 0+57.06		10.76	19.42		1608.66			
	25.67 Top 6X6			9.79	09.63	16.04	3.92	16'-3 1/8

4/9/20

HI 4.8
1603.34

Topog - Sand Storage #2

Continued from Page 32

					Corrected Distance	Diff in Elev.	
				98.54			
	185	270-0	+6-36	4.8	19.7	183	+21.2 ✓
	187	268-27	+6-32	4.8	19.6	185	+21.1 ✓
	176	258-15	+4-31	4.8	12.3	175	+13.8 ✓
	174	254-15	+3-30	4.8	09.1	174	+10.6 ✓
	158	262-40	+3-36	4.8	08.4	158	+9.9 ✓
	147	259-30	+2-17	4.8	04.3	147	+5.8 ✓
	134	264-30	0 0	3.0	00.3	134	
Pt of Rock	127	267-45	0 0	1.0	02.3	127	
	148	273-15	+3-40	4.8	07.9	147	+9.4 ✓
	163	275-45	+5-43	4.8	14.6	162	+16.1 ✓

✓

Plotted 4/13/20

Reference Points

Occupy. 44-414-22 Sight B-44
for 0.0 - Measured - 7.51 - Set Hub
44-422 — Set Reference
Hub about 654.5

4/21/19
Bob Mitter

Location Concrete Tower #1

See Page 54
for Revised Location

18 R 303	905	3845		1529.40
R Rock			10.79	27.66
Top Rock			507	33.38

Overflow Section

1527 = 329.54
1528 = 330.31
1 ft = .077
.1 = .077
.66
462
462
.0508

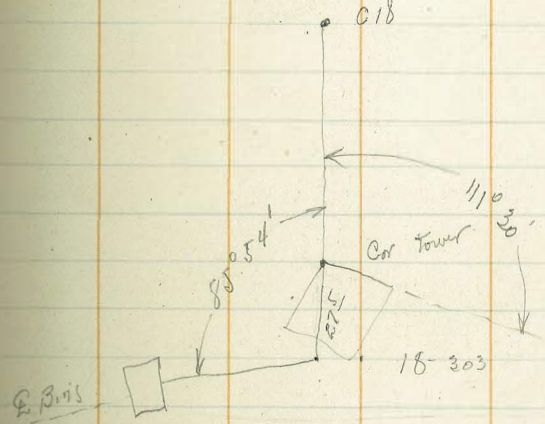
400
49
351
330.06
70.94

329.54
.51
330.06 R for E 27.66

Gravity

1528 = 333.96
1527 = 333.21
.75
.66
450
450
.4950

333.21
.50
333.70 = R for E 27.66



tower Diamentions
7'-6½" x 10'-6¾"
7.54' x 10.56'

4/21/20

Bub
Winter

Levels Profile Conc. Chute

Hub - Pot Conveyor #1		5.61	01.55		96.94
End M. Chute	01.26			0.71	01.34
0+5	61			481	97.74
0+12	97.46			537	97.18
0+19	99 94.26			11.17	91.38
0+33	15 89.00				
TP Peg		0.54	88.45	1484	87.71
0+62	14 TP	7.00	81.45	13.80	74.45
0+76	64 Nail			17.41	69.04
	+16.87				
BM Nail in Stump				1.85	79.60
+16.87					
0+93.44	11.05				
1+08.51	7.73				
T.O.R.					
1+20.28					97.40
1+40. POR					
1+45.27					

5.30
96.94
01.24
4.84
97.40

0+12 -

01.34
.08
01.26 grade - 00
8.
94.26 grad 0+20.

98.26
97.60

2.5 / 700 / 8

2.5 / 621.40 / 24.86
50
121
100
214
200
140
150

97.18
94.26
2.92

98.26

2.5 / 120 / 48
100
200

01.26
24.86
77.40
4.45
72.95

01.26
13.26
89.
91.38
89
2.4

2.5 / 331.50 / 13.2
25
81
75
65
50
150
150

4/22/20

Fisher Mixter

Profile Concrete Chute

S.E. Cor Mixing Plant Conveyor # 2			1601.70		
P.O.T. -1+06		1.72	1601.72		1600.00
				4.76	96.96
0+56 61				3.96	97.74
Bent # 4					
0+19.99				4.52	97.18
0+33 15				10.32	91.38
T.P. Pig		2.32	90.03	13.99	87.71
0+41 ±				0.00	
0+45	84.26			6.72	83.31
Bent # 5					
0+56 ± TP				13.70	76.33
0+62.14		0.66	75.13	15.56	74.47
BM Nail in Stump				10.40	79.63
Bent # 6					
0+70				3.18	71.95
0+76 64				6.07	69.06
Bent # 7					
0+84		1.22	62.38	13.97	61.16
0+93 44				5.26	57.12
Bent # 8					
0+98				7.45	54.93
1+08 51				11.95	50.43
Bent 9					
1+12				13.29	49.09
12-315				0.58	61.50 1561.74
1+20 28				10.74	51.64
TP ±		0.79	48.00	15.17	47.21
14-319				10.46	15 11.92
1+26 10				2.69	45.31
1+40 11				7.19	40.21
TP		5.00	41.17	11.83	34.17
1+45 27				9.56	31.61

Bents - Concrete Chute

41

Top of Post 1'-4" higher than Grade of chute

Station	Chute Grade	Top of Post
		≈ 5/0
Bent # 1		
	1602.26	1603.59
Bent #2		
0+14	1596.66	97.99
B # 3		
5+28	91.06	92.39
B # 4		
0+42	85.46	86.79
B # 5		
0+56	79.86	81.19
B # 6		
0+70	74.26	75.59
B # 7		
0+84	68.66	69.99
B # 8		
0+98	63.06	64.39
B # 9		
1+12	57.46	58.79
B # 10		
1+26	51.86	53.19
B - # 11		
1+40	46.26	47.56
	46.66	

4/22/20
Fisher
Mixter—

Grades for footings — Concrete Chute

	Grade Top of Post				
0+70 Bent # 6		9.44	81.39		71.95
0+59 North Bent # 5	81.19			3.76	77.63
South B 5	81.19			6.70	
0+56 —		0.32	76.65		76.33
0+70 - B# 6 North	75.59			2.18	
0+70 B 6 South	75.59			6.93	
0+93.44		8.72	65.84		57.12
Bent # 7 0+84	69.99			0.86	64.95
South 0+84	69.99			5.01	60.83
1+12 —		10.06	59.15		49.09
Bent 8 North 0+89	64.39			1.21	57.94
B# 8 South 0+89	64.39			5.45	53.50
1+20.28		2.00	53.64		51.64
Bent # 9 North 1+12	58.79			1.73	52.91
B # 9 South 1+12	58.79			5.32	48.32
1+40		9.85	50.66		40.81
Bent # 10 North 1+26	51.86			3.71	46.95
#10 South 1+26	51.86			10.80	39.86
1+26		0.18	45.49		45.31
B # 11 North 1+40	47.56			3.16	42.33
B # 11 South 1+40	47.56				

2.13 out = Base on all Bents

6 : 1 Slope — 3 0

	Vertical Height	Dist out.	Slope Dist.	Dist out offset	Reference points
	3.56	2.72		5.72	Hub 11.4
	6.50	3.23		6.23	
		2.32		5.32	
		3.48		6.11	
		+ on work.			+ on Rock
	5.01	2.96		2" offset	~~2 offset~~
	9.16	~~3~~ + on Rock 6.6		5.66	
		~~3~~		~~5.29~~ 3 Head 21 Head	
	6.45	3.20		5.20 3'	
	10.89	3.94		6.94	
	6.88	3.27		Nail 3" in Rock. 6.27 2'	
	10.42	3.86		5.86	
	4.91	2.95		+ on Rock. 5.95 (8)	
	12.0	4.13		7.13	
				(31)	
	5.23	3.00		6.02 + work.	

		H.I.		
		4.9	104.9	
30'	2			5.2
48				4.2
60				3.3
86		Void		4.3
100				3.0

4/26/20

Bob Fisher.

Spoil Track for Stiff Leg derrick

49° Curve.

Δ 52° 54' 48" 26 27 24

R 120.57

T 60

L 107.98

24-30

Set 0-0 back 3' —

0+90 PC	49° Lt.	Occupy 0+90
1+05	15'	3°-40-30
1+20	30	7°-21.00
1+35	45	11°-01-30
1+50	60	14-42-00
1+65 P.C.	75	18-22-30
1+80	90	22°-03-00
1+95	105	25-43-30
1+97.98 P.T.		43 48 26-27-18

Occupy 1+65 sight 0+90 to

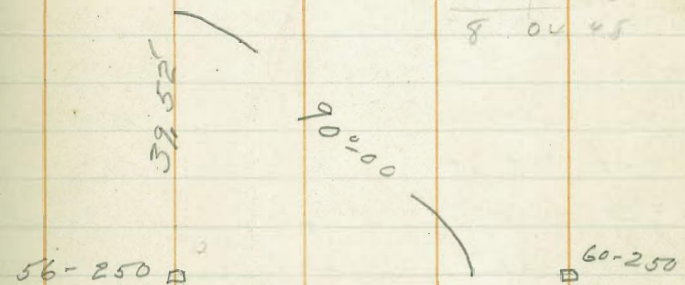
18°-22-30 —

1+80	15'	3°-40-
1+95	30	7°-21
TT 1+97.98	32.98	8°-04'

2-74 98

245
298
1960
2205
490
3010
60
43.80.60
60
48.36.0

7 21
43 48
8 04 48



4/26/20
Bub Fisher Mixter.

Profile Spoil Tracks from 56-289-63
Grade = Bottom 8x8 - Bottom Ties.

56-300		8.91	1560.32		1551.41		
Hub 0+00	58.27			7.71	52.61	C	F. 6.7
Hub 0+15	57.97			8.22	52.10		5.9
0+30	57.67			7.93	52.39		5.3
0+45	57.37			7.53	52.79		4.6
0+60	57.07			5.64	54.68		2.4
0+75	56.77			4.54	55.78		1.0
△ 49° LAT. C. 0+90	56.47			4.75	55.57		0.9
Nail 1+05	56.17			5.18	55.14		1.0
Nail 1+20	55.87			5.06	55.26		.61
Nail 1+35	55.57			4.75	55.57	0.0	
Hub 1+50	55.27			3.15	57.17	1.9	
Hub 1+65	54.95			4.33	55.99	1.0	
Hub 1+80	57.67			8.33	51.99		2.7
Hub 1+95	54.37			10.03	50.29		4.1
Hub P.T. (TP) 1+97.98	54.31	2.14	5258	9.88	1550.44		3.9
Hub P.O.T. 2+42.98				9.85	42.73		

4/28/20
Fisher
Mixter

Grades for footings Concrete Chute

	Grade Top of Post				Ele Top Footings
1+46		9.38	50.19		40.81
North B #10 1+26	53.19			4.95	45.24
South B-10 1+26	53.19			8.86	41.33
Curves PT 41		8.79	44.96		153617
North B-11 1+40	47.56			3.52	41.44
South 1+40 B-11	47.56			11.95	33.01
South - B-10 1+26		11.49	52.82		41.33
North B 9 1+12	58.79			1.47	51.38
South B-9 1+12	58.79			4.14	48.65
B-9 1+12		9.63	58.72		49.09
North B-8 0+98	64.39			3.40	55.32
South B 8 0+98	64.39			5.30	53.42
0+93.44		9.20	66.32		57.12
North B-7 0+84	69.99			3.71	62.61
South B-7 0+84	69.99			5.66	60.66
0+62 14		1.66	76.13		74.47
North B-6 0+70	75.59			3.27	72.86
South B-6 0+70	75.59			5.40	70.73

2.63 = Base on all bents — 6:1 slope
2.08

Vertical Height	Dist. Out	Slope Dist.	Ft - Inches	
7.95	3.46	8.0596 / 8.60	8'-0 3/4" / 8-7 1/4"	
11.86	4.11	12.0236 / 12.02	12-0 1/4"	
6.12	3.15	6.7044 / 6.20	6-2 3/8"	6'-2 1/4"
14.55	4.55	14.7507 / 14.75	14-9"	
7.41	3.36	7.5112 / 7.50	7-6 1/8"	
10.11	3.82	10.2495 / 10.24	10-2 3/8"	10'-3"
9.07	3.64	9.1951 / 9.20	9-2 3/8"	9'-2 1/4"
10.97	3.96	11.1413 / 11.12	11-1 1/2"	
7.38	3.36	7.4818 / 7.48	7'-5 3/4"	
9.33	3.68	9.4587 / 9.46	9'-5 1/2"	
2.73	2.59	2.7677 / 2.77	2'-9 1/4"	
4.86	2.94	4.9270 / 4.93	4-11 1/4"	4'-11 1/8"

0+62.14		6.56	81.03 ✓		74.47 ✓
North B-5 0+56	81.19 ✓			4.07	76.96
South 0+56	81.19			6.78	74.25

✓

Vert Height	Dist out		Ft + Inches	
	2.79	4.88 ✓		
4.23 ✓	2.84 ✓	~~4.29~~ 7.035	4-3½"	✓
6.94 ✓	3.29 ✓ 3.2 ✓	7.04	~~7-0½~~	7'-0 3/8" ✓

4/29/W.
Fisher
Mixter

Elevations for Star Drill Quarry-

Elev Assumed	11.40	1711.40		1700
			~~0.73~~	
	11.68	22.35	0 73	10.67
	12.83	34.75	0.43	21.92
	11.41	44.70	1.46	33.29
	12.82	56.37	1.15	43.55
Hole #1			6.37	50.0
			3.37	53.0
			1.37	55 0
	8.18	64.40	0.15	56.22
				~~56.4~~
			6.40	58.0
			4.40	60.0
			2.40	62.0
			2 40	62.0
			2 40	62.0
	0.82	50.82		1750 0

Profile

		1756.37		
= 0.0				
Hole #1			9.4	47.0
10			7.5	48.9
20			6.2	50.2
30			4.8	51.6
40			2.7	53.7
50			0.0	56.4
	8.18	64.40	0.15	56.22
60			5.9	58.5
70			5.0	59.4
80			4.5	59.9
90			3 7	60.7
100			3.0	61.4
1+10			2 6	61.8

4/29/30

Fisher Mixter-

Check Levels - for - Star Drill

Elevations

	0.82	1750.82		1750 00
Check Old - T.P.			7.26	43.56
	0.59	38.48	12.93	37.89
check. old T.P.			5.15	33.33
	0.57	26.69	12.36	26.12
check old T.P.			4.80	21.89
	2.57	17.44	11.82	14.87
check Old T.P.			6.77	10.67
	0.56	5.65	12.35	5.09
			5.70	0.00
100-5 - Drill			3.05	02.6

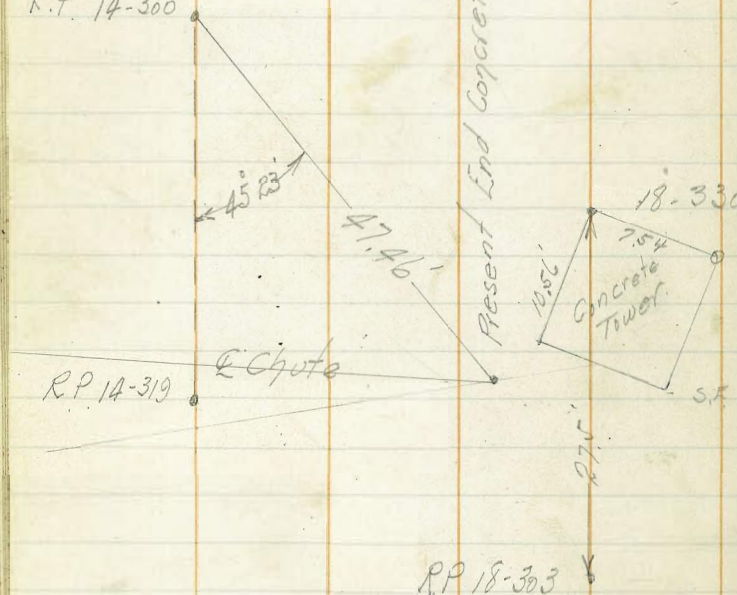
5/25/20

Bub
Fisher
Mixter

See Page 54

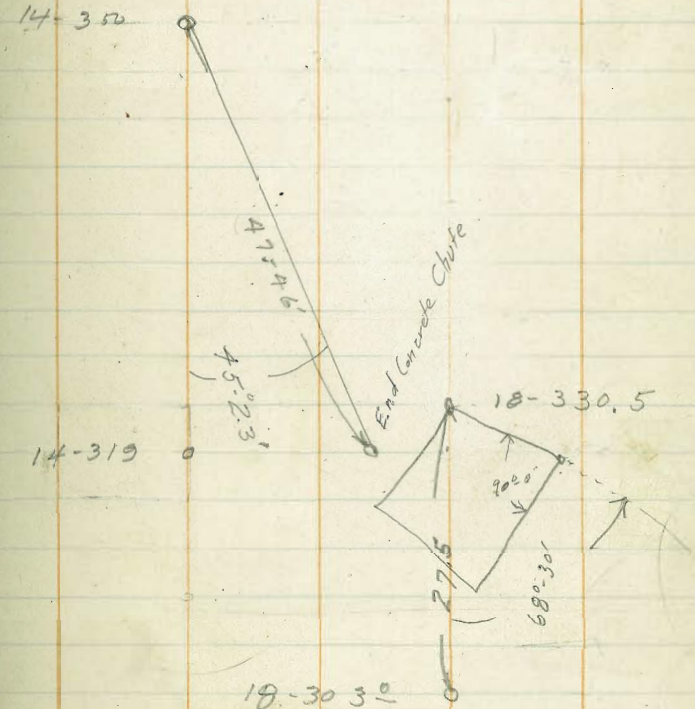
Location Concrete Tower #1

14-319	9.39 1561.23		1561.84
Flowline Concrete Chute		15.12	46.11



C 18

90-45
45-22-30



Fisher Marker — Elevation of Corners to Concrete Tower.

14 - 319.	0 78	1552.62		1551.84
Southwest Corner.			12.64	39.98
T.P. on Rock.	0.99	40 57	13.04	39.58
T.P. on Rock.	3.69	32.22	12.04	28.53
N.W. Cor.			4.29	27.93
N.E. Cor			8.56	23.66
S.E. Cor.			6.73	25.49
18-303			2.82	29.40
South ℄			6.31	25.91
℄ North.			5.10	27.12

5/30/20

Fisher Mixter

Grade for Truck — Sand Stockpile to Conveyor #2 —

B.M. Nail North side Tunnel		11.82	562.79		165.097
0 - 0				2.39	60.40
0 + 5.6				2.20	60.59
TP — on Rock. TP Breaks		10.39	72.52	0.66	62.13
0 + 62		12.67	82.77	2.42	70.10
T.P. - Top of Stake x Water pipe		11.86	92.66	1.97	80.80
1 + 37				9.03	81.63
Air pipe 1 + 60				5.36	87.30
T.P.		7.41	97.18	2.89	89.77
1 + 96				4.14	93.04

← 19.32 Rise Grade 15.77 0/0 →

5/31/20
Fisher
Mixter

Profile for pipe Line from Well To 350 Upstream

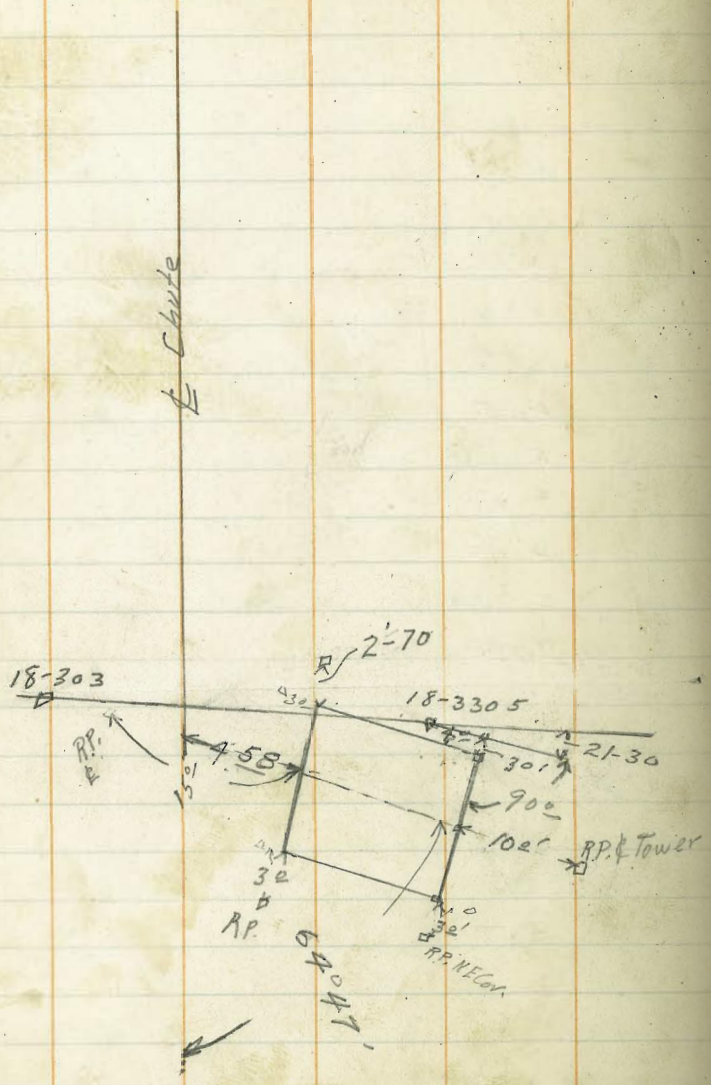
	Grade					
Top of Well		3.93	71.57		1467.64	
0+25	67.6			5.7	65.9	F 1.7
0+16				4.4	67.1	F 0.5
0+50				4.0	67.6	0.0 ✓
0+97				4.2	67.4	F 0.2
0+97				5.5	66.1	F 1.5
1+0				5.5	66.1	F 1.5
1+50				5.0	66.6	F 1.0
2+00				4.5	67.1	F 0.5
2+50				4.1	67.4	F 0.2
3+00				3.9	67.7	C 0.1
3+50				3.6	68.0	C 0.4
(TP) 3+50 Top of Stake		4.50	72.97	3.16	68.45	
4+00				4.65	68.2	C 0.6
4+50				4.2	68.7	C 1.1
5+00				3.7	69.2	C 1.6
5+50				3.5	69.4	C 1.8
6+00				2.8	70.1	C 2.5
B-38		3.38	1473.68		1470.30	
Top of Well				6.04	1467.64	

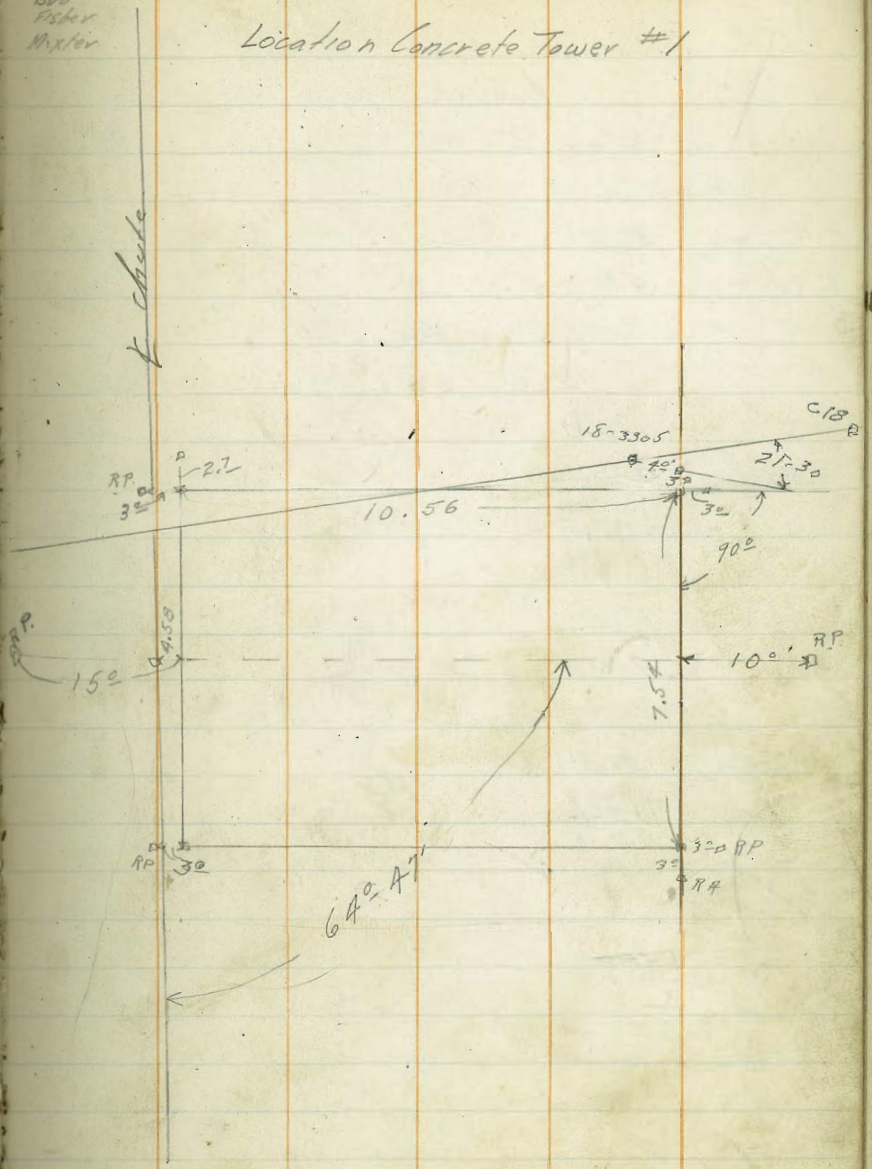
694
67.6
1.8

June. 8. 1920

Bub
Fisher
Mixter

Location Concrete Tower #1





6/8/20
Bub
Fisher
Mixter

Occupy C 46 Sight C 41
for 3°-35'

C 41	50'	3°-35'
C 40	60	4-18
	70	

Occupy C 41-

10	40	1-26
30	38	2 09
50	36	3-35'
70	34	5 01
90	32	6-27
110	30	7-53
130	28	9-19
150	26	10-44
155		11-06

Distant

Near B-30 B.M.		0.47	72.20		1471.73
T.P.-on Rock		9.30	67,11	14.39	5 7.81
30	11.30		15	15.4	5 1.7
28	10 4			84	61.0
26	9.8 ~~10.0~~			0.0	67 0
T.P. on Rock		0.0	57.8		5781
30	12.0		15	13.0	448
34	12.1			140	43.8
32	11 7			10 2	47.6
30	11.5			7 5	50 3
Low point in Excav-				16.3	41.5

Elev- for Bottom of Sand.

C-28				11.2	46.6
36				13 5	44.3
34				14 0	43.8
32				14.0	43.8
B-28		4.18	9262		1488.44
				14.9	7 7.7
				89	83.7

Notes Transferred
Book 9 - Page 31

6/10/20
Fisher
Mixter.

Location of End of Concrete at Elev 1477

B.M		6.17	77.90		1471.73
				0.9	77.00
T Pon Rock		5.94	80.38	3.46	74.44
				3.38	77.0

El- 1477 - On 400 Radius - at
C 44 + 10 5 -
Need - 12 Excav - at C44 - 408.5

6/12/20
Fisher
Kuyk

Difference of Elev - of Concrete footings Concrete Tower #1

B.M		2.27	1531.67	29.40
SE Cor			8.73	1522.94
NE Cor			10.03	1521.64
NW Cor			9.06	1522.61
SW Cor			8.04	1523.63

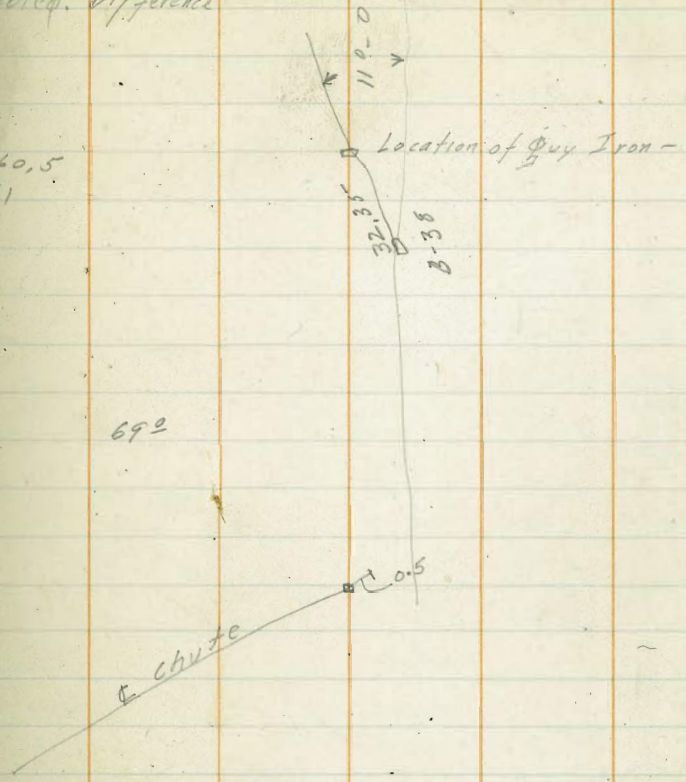
SW Cor	0.0	
SE Cor	0.69	0-8 1/4"
NE Cor	1.99	2.00
NW Cor	1.07	1-0 1/4"

6/12/20
Fisher
Mixter.

Dist for Cable.

End Concrete Chute H I		5.55	51 66		46.11
Guy Pin	278		-14°45	4,55	
B-38		9.0	79.3		1470.30
El of Point				1.65	77,67

Dist Corrected.	Ele Difference
260,5	
261	



6/15/20

Bub Fisher Mixter

Upstream Face - for Excavation

occupy C 46 - Sight 46-250 for 90°-

Turn 12°-53 for C-28-180'

C 28	
180	12°53'
C-30	
160	11°-27'
150	10°-45
~~32~~ 140	10° 02'
130	9-19
~~120~~	8-36
100	7-09
80	5-44

		3.			~~57.81~~
On Rock near Flume BM		3 97	1461	78	145781
				~~18.7~~	~~45.0~~
T.P.		1-19	49.46	13.51	48.27
				11.8	38,0
				13.7	35.7
				7.4	42.0
				6.0	43,4
Lowest Elev—				16.0	33x5
TP		11 40	58 .68	2.18	47.25
				0.6	58.8

out

Location of Star Drill Holes.

#6	24.3	#14
		10'
		#13
#5	19.8	#15
		10'
		#14
#6	20.0	#16
		10.9
		#15
#7	18.7	#17
		10.7
		#16
#7		#18
		10 3/4
		#17

12.7

12.9

10.7

7/7/20

Bub Fisher Mixter

274 14 Radius = 1364 Chords -20' on 400' R.

At 34 - 274 14 Chained 1.48 toward Center for 34 - 272.76

	Dist.	
32 -	13.64	1°-26'
30	27.28	2° 52'
28	40.91	4°-18'
26	54 55	5-44
24	68.19	7°10'
	+3.41=	
23+50	71.60	7°-32
	+3.41	
23+0	75.01	7°54
22	81.83	8°-36

7/7/20

Bub Fisher Mixter

Radius Downstream face:

59

	Radius				
34-274 14		8.98	147603		1467.05
34-	277 32			9.0	1467 0
32				12.29	1464-0
30	243 0			33.6	40.4
26	243 00				47.0
34-274 14		7.03	74.08		1467.05
38	274 89			8.6	65 5
36	277 32			7.3	66.8

6/3/20

Landing Platform Cement Shed

Floor Cement House		11.21	1632.21		1621 ±
	21.0			9.6	22.6
				6.3	25.9
Landing Platform NW Cor	22.57			0.4	31.8
				5.7	26.5

	C	E
	1.6	
	C 4.9	
	C 9.2	
	2.9	

At C 31 - Sight C 46 - for 10° 45'

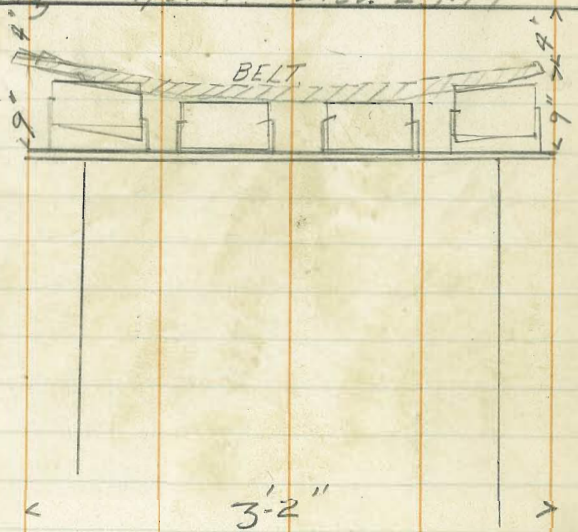
C 32 ✓	10.0	0 - 44'
C 33 ✓	20'0	1° 26'
C 34	30 0	2° - 09
C 35 ✓	40	2° - 52
C 36 ✓	50	3 - 35
C 37 ✓	60	4 - 18
C 38 ✓	70	5.01

5.0 SE of Sump B.M.		0.19	1453.17	1452.98
		4.56	4314	1459	38.58
About 32-411 B.M. Nail				798	35.16

9/23/20
Bob Grade
Fisher Top of
Mixter Floor.

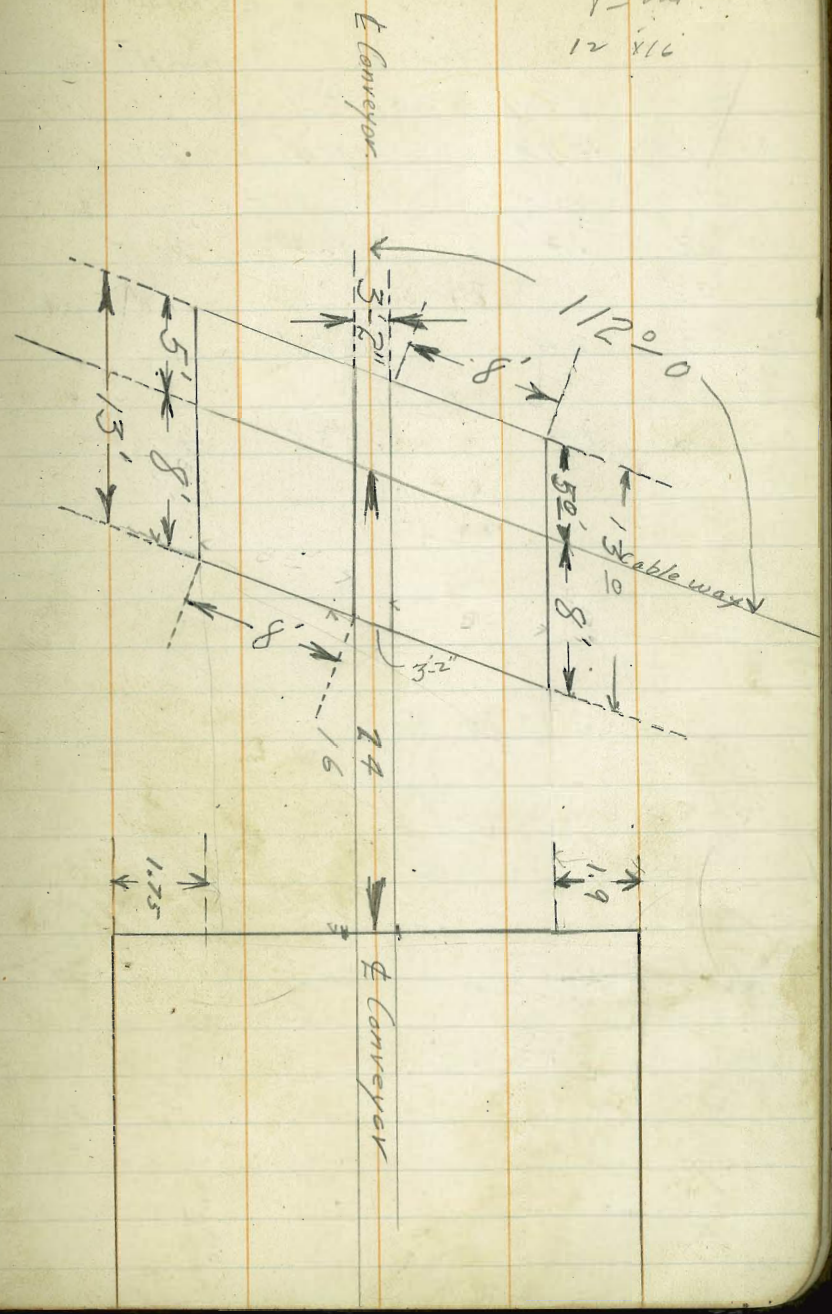
Floor Cement House		7.50	1628.50	1621.00
To				
	1723.99		4.51	23.99

Landing Platform - Elev. 23.99



Cement Conveyor.

5' out
12 x 16



7/22/20 Sections for Estimate.

	cut.	Dist.	End Area ~~Area~~
Sec #1 42'	7½'	70'	.490
Sec #2 30'	16'	63'	1005
Sec. #3 54'	24	50'	1200
Sec #4	14	35'	490

Cu yds.

1150

1230

1750

4130

1,000 - sta 50 West.

~~1500~~

~~3000~~ - sta 57 East.

~~4000~~

~~5000~~

~~17130~~

~~14630~~

~~21000~~

~~18130~~ Balance left July 15

Sand

80 × 20 × 15 = 8000

40 × 27 × 30 = 12000

40 × 30 × 20 = 1000

Class 1 – 3000

Class 2 – 500

~~4000~~

~~3000~~

~~1000~~

~~5000~~

13000 Class 3+4

3000 Class 1

~~500~~

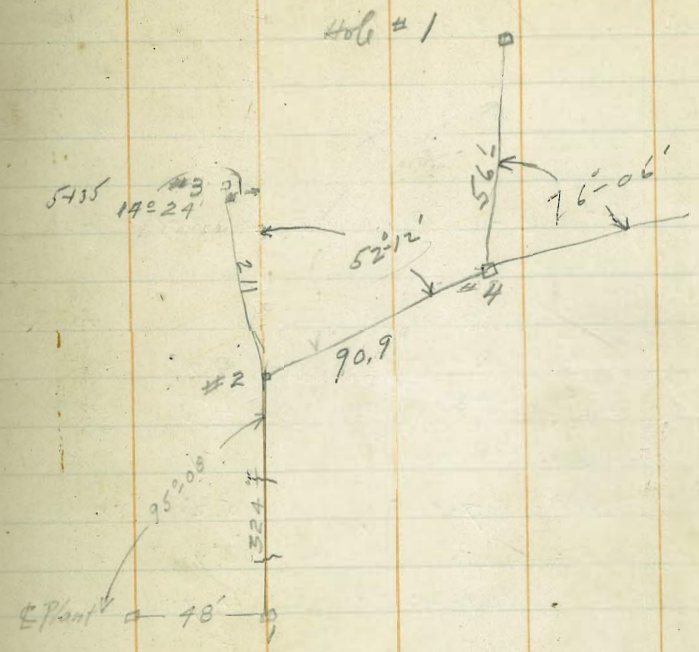
16800 Class 2

Totals

7/23/20
Bub
Fisher
Mixter

Location of Star Drill Holes

		V. A.		
#2 To #4	100'	24°-38-		90.9 ✓



7/23/20
Bob Fisher
Mixter.
B.M. Plane
Above Crusher.

Topos

Elev-

		2.36	1754.03		1751.67
# 2				8.18	1745.85

At #3 - Sight #2 for 180° - Az Rt.

HI 80.3

	52.0 4.7	70-45		47	45.7 ✓
Ver 10'	36.0 43	83-0	✓	4.3	46.1 ✓
Ver 8'	27.0	84-15	✓	5.1	45.3 ✓
Ver 5'	24.1	107-30	✓	5.2	45.2 ✓
Ver 20	31.6	128-15	✓	5.9	44.5 ✓
Ver 20	38.0	129-15	✓	4.9	45.5 ✓
	50.7	145-30	✓	5.9	44.5 ✓
Ver 12	60.2	152-35	✓	6.8	43.6 ✓
Ver-10	77.5	154-30	✓	6.8	43.6 ✓
Ver-10	84.6?	157-30	✓	6.7	43.7 ✓
9°	92.5	157-0	✓	6.8	43.6 ✓
15	10.2	159-30	✓	6.6	43.8 ✓

Plotted 7/27/20

✓

64

Topos

At #2 Sight #3 for Zero Az Rt.

HI 76.52

		0.97	46.82		1795.85
	106.0 ✓	17-15 ✓		37	43.1 ✓
	95 ✓	18-30 ✓		41	42.7 ✓
	150-0 ✓	24-30 ✓		0.0	46.8 ✓
	85.0 ✓	26-45 ✓		1.0	45.8 ✓
	68.0 ✓	27-30 ✓		1.0	45.8 ✓
	58.5 ✓	23-45 ✓		3.4	43.4 ✓
	47.3 ✓	20-0 ✓		2.7	44.1 ✓
	30.0 ✓	50-15 ✓		4.0	42.8 ✓

Quarry Floor

3425				5.1	41.7
4425				4.2	42.6
5425				1.8	45.0
Rock T.P.		13.53	57.29	1.06	45.76
Rock T.P.		14.52	71.66	2.15	57.14
Rock T.P.		15.25	86.27	0.64	71.02
" "		13.80	97.19 97.19	2.88	83.39 95.89
				1.30	95.89

Plotted 7/27/20

✓

7/23/20.

Elev of Star Drill Holes

T.P.	1,30	~~27.19~~ 97.19		~~1795.89~~ 1795.89
3 holes - North of #1 - old #12 - filled up.				
old #2 filled up -				
#1 = old #12			6.2	91.0
#2 old #9			3.6	93.6
T.P.	11.30	7.19	1.30	1795.89
#3 old #8			6.7	00.5
#4 Top of Plug old #7			6.9	00.3
#5 Top of Plug old #3			5.3	01.9
#6 Top of casing old #4			3.1	04.1
#6 Top of Ground			4.4	02.8
#7 old #5			2.2	05.0
Top of Ground			3.2	04.0
55 ○			9.65	97.54
T.P.	12.55	19.17	0.57	96.62
T.P.	15.31	31.80	2.68	16.49
Nail in Rock B.M.			1.66	1830 1/4

Topog

At Hole #1 Sight #4 for Zero 39

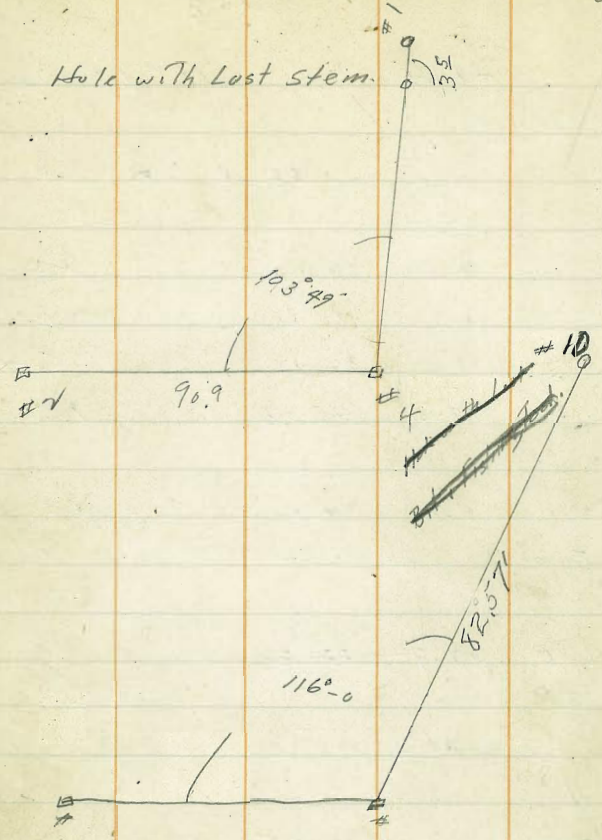
T.P.		12.20 95.60		83.40
	13.2	45-0	10.5	85.1
	13.0	89-0	8.3	87.3
	13.9	117-30	7.3	88.3
	12.4	142-20	6.2	89.4
1/4 To 1 for 16' even Slope to Bott.	17.51	144-15	6.0	89.6
" "	26.8	158-30	5.2	90.4
" "	39.8	162-15	3.6	92.0
run - 5'	34.8	187-30	0.3	95.3
" 7	23.0	190-0	2.1	93.5
" 5'	7.8	212-15	3.9	91.7
	11.3	342-45	6.3	89.3
	22.6	338-30	5.8	89.8
for 90	30.9	321-45	5.2	90.4
Top Hole #5	68.1	181-0		
#2	27.6	178-45		
#3	40.7	179-12		

7/23/20

Topog

At Hole #5 Sight Hole #1 for Zero Az RI

		06.44		-89
T.P.		10 55	1806.45	1795.90
✓5	22.4	352-45	8.2	98.2
Hole #4	14.0	9-30 ✓	6.2	00.2
vert 5°	6.0	327-45	4.6	01.8
v-5.°	11.5	210-30 ✓	4.1	02.3
1/4 Tol-6'	18.8	212-10	2.4	04.0
Hole #6	15.6	184-15 ✓		
Hole #7	29.6	187-50 ✓		
1/4 Tol-7'	39.5	195-20	2.6	03.8
1/2 Tol-8'	48.4	192-20	2.7	03.7
Top of cliff	58.9	193-0	5.8	00.6
	53.4	193-0	2.8	03.6
	52.9	185-15	2.7	03.7
Top of cliff	59.0	185-15	10.7	95.7
T.C.	42.6	182-40	2.9	93.5
T.C.	31.0	178-0	2.6	93.8
edge of Mesa	18.0	167-0	3.5	92.9
T.C.	24.8	135-0	10.7	95.7
	9.9	125-15	4.4	02.0
	18.5	116-20	7.8	98.6



1/23/20
PM.

Topo Φ

At Hole #5 Sight #1 for Zero Az Rt

HI 1806.54

	10,64	06.53		1795-89
7.8	68-30		4.2	02.3
15,3	84-30		8.0	98.5
13.7	34-15		5.5	01.0
18-0	43-30		7.5	99.0
Hole # 8 65.0	347-0.8		6,3	1800,2
T.P.			1.70	04.83
Auxil Pt 39.7	330°50'			

At Auxil Pt from Hole #5 Sight #5 for 00 Az Rt

HI 11.29
T.P.

	6.45	11.28		04.83
11.6	325-20		7.7	03.6
10,3	325-20		5.0	06.3
Vert 4.0 5.5	60-15		4.9	06.4
11.9	268-30		9.2	01.1
11.3	267.0		6.6	04.7
7.8	190-0		5.9	05.41
8,3	177-30		2.5	08.8
22.4	201-15		9.0	01.3
22,9	194-0		4.6	06.1

¼ to 1 for 15'

¼ to 1 for 30'

(17)

Hole #12 —

Hole #4 21.1

13.5

13.00	1813.3		1800 3
		2.3	1811-0
Top Platform		4.3	1809.0
Top of Hole			

Hole #5 to #13

9.9

#5

12,5	14.4		01,9
		2.0	12.4
Elev Hole #13		3.4	11.0

See Page 58 for #14 To #18

Topo ℄

At Auxil Pt from Hole #5 - Sight #5

HI 1811.39

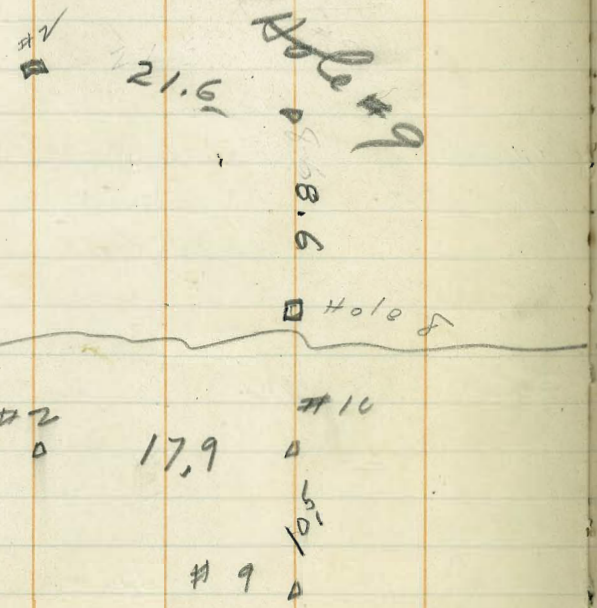
11.78

36.7	206-30	11.5	99.8
36.1	202-30	7.1	04.2
22.0	239-0	13.6	97.7
21.8	237-30	9.0	02.3

62' East of Hole #8 = Same Elev.

Plotted 7/27/30

Location Hole #9

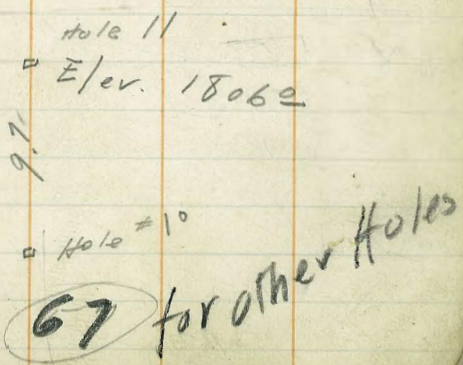


8/2/30

7/26/30
Fisher
Mosher

— Check Elevation on Holes —

T.P.	9.80	05.69		1795.89
11			~~9.0~~	
Hole #1			14.5	91.2 ✓
Hole #2			12.0	93.7 ✓
Hole #3			9.0	96.7
Hole #4			5.6	00.1 ✓
Hole #5			3.8	01.9 ✓
Hole #6			2.8-9	02.9 ✓
Hole #7			1.4	04.3 ✓
Hole #8 (T.P.)	7.2	07.7	5.2	00.5 ✓
8/2/30			5.2	02.5
T.P.	12.5	08.4		95.89
			4.4	04.0
			1.6	02.8



See Page 67 for other Holes

Reference Points

Coordinate Points	Elevation
"B" Line	455.79
Tangent +4	
Tangent 16	
18	1557.81
20	1545.11
22	1534.73
24	1525.20
26	1503.85
28	1488.45
30	1472.35
32	
34	
36	
38	1470.30
40	1473.85
42	1480.64
44	1490.41
46	1502.68
48	1512.78
50	1522.67
52	1532.89
54	1545.20
Tangent. "B" Line 450	
56	1550.34
58	1559.53

Coordinate Point	Elevation
B-450 East Tangent	
60	1568.41
62	1579.43
64	1588.64
66	1603.56
68	1617.48
70	1624.03
74	1650 44
East Tangent. 325' Line	
60	1571,25
62	1582.59
64	1591.57
66	1602.58
68	1612.52
70	1623.02
72	1633.50
East Tangent. 275 Line	
60	1567.79
62	1579.68
64	1588.49
66	1600.42
68	1614.82
70	1622.85
72	1633.30

Coordinate Points	Elevation
300' Line	
38	1474.66
40	1480.30
42	1488.29
44	1496.84
46	1507.33
48	1516.37
50	1524.46
52	1536.34
54	1540.42
56	1551.41
58	1560.76
60	1571.50
250 Line	
38	1491.47
40	1496,25
42	1507.15
44	1513.11
46	1519.99
48	1526.28
50	out.
52	
54	
56	
	✓

Coordinate Points	Elevation
250 Line	
58	
60	1568.21
Misscellaneous	
00-380	~~1626.16~~
00-429	~~1630.56~~
2 —	
2 —	
4-350	1603 26
4-455	1615.92
6	
6-480	1615.35
8 —	
8 450	1604.85
10-315	1573.77
10-442	1596.58
12-315	1561.72
12-437	1588.34
12-502.09	1600.80
14-319	1551.84
14-350 42	1556.70
14-417.92	1574.98
16 446.17	1567,78
18-303	1529.40
20-312	1515.59
16-309-	1539.58

Coordinate Points	Elevation
Misscellaneous	
21 -	
22-321.39	1511.09
24-321.2	1502.71
26-	1510.42
27-357	1479.60
28-	
28-	
28-488 HUB	1503.57
28-520 P.O.R.	R.P.
28-600 Top of Wall	1467.41
34-274.14	1467.05
38-229.5	1509,45
38-480.4 P.O.R.	1477.56
40-413.53 Nail	1482.94
42-217.11 HUB	1514.56
42-412.67 Nail	1486.04
42-434.02	1491.70
44-640	Ref point
44-414.49	1491.53
46-432.22	1509.72
46-414.64	1503.70
	✓

Coordinate Points	Elevation
"P" Line	
00-301 = 0+00	1618.65
0+32	1627.85
0+89.08	1650.00
2+00 Iron pin - 5'S	1686.21
2+08 stump on line	1696.61
1+85	1679 42
2+33.6 Nail in 2x8	1703.13
North side Tunnel West	1650.97
Cableway Line	
0.0-446.6 0+00	1631.70
1+00	1675.60
1+75	1707.05
2+00	1715.89
2+50	1739.25
3+00	1760.48
30' N-3+00 Nail in Rock	1764.33
East Cableway Line	
50-380.3 0+00	1524.51
1+00	1561.51
2+00	1618.81
2+38.43	1649.52
3+00	1685.42
3+29.72	1704.52
3+76.33	1739.82
4+25	1766.43

38-480½ 1477.56

40-219.0 1513.09

"Concrete Nail in Sewer Joint

10-446.58 (447.0)

12-340.13 1569.42

12-426.32 1587.32

12-502.09 1600.80

12-

14-436.28 1574.96

14-495.10 1588.87

16-333.20 1569.42

16-464.42

16 490.09

18-488.0 1561.08

18

20 421.21 ✓

20-505. ✓

22-497.40 ✓

22-489.24 ✓

24-

24-505.0 ✓

24

26

26-471.20 1510.42

26

28

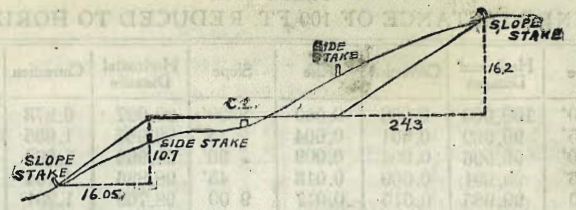
28-481.77 1503.57

List of BMs

Harris BM. VS.GS Top of Wall	Iron Pin Set in top of Boulder 60' South of Old Blacksmith Shop Barrett Datum	1626.33
		1467.41
Nail in Stump C-52-C54 - 15' North		1534.73
Hub about C 7+60 with Wit.		1649.80
~~Iron Pin Set in Boulder 2+08 "P" Line 5' S.~~		~~1696.61~~
Nail in Rock 30' N - 3+00 - West Cableway		1764.35
On Old Engine Base N.S. Canyon		1461.38
Nail in 2"x8" North side Tunnel "P" Line.		1650.97
Nail in stump about 52-468"		1537.77
Nail in Stump 10-340		1579.55
10-441 Nail Top of Concrete Joint End Iron Pipe Sewer Line		1597.75
Nail in Stump about 12-330		1570.88
Nail in Stump about 16-468		1573.90
Nail in Stump about 17-410		1550.96
Nail in Rock 4' West of SW Cor. Concrete Tower #1		1546.24
Nail in Rock 24-432		1525.75
Nail in Stump Near B 30		1471.73

IMPROVED TABLES AND INFORMATION

1667
6.0
10.00



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1½ 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

Computed by L. Leland Locke.

1750 El - Quarry