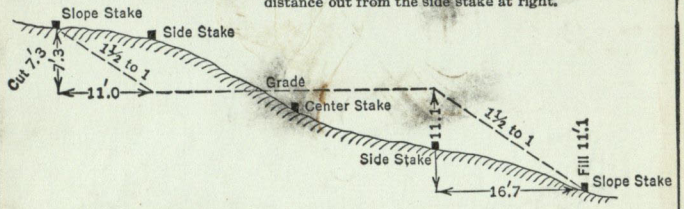
GARVEY
DRAINAGE
DITCH H
Book # 2

MINING TRANSIT BOOK

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	Cut or Fill
	Distance out from Side or Shoulder Stake										
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

For Curve Tables see end of book.

Cross sections of South end of Garvey Drain page 2

New Grade for Garvey-Neal From STA. 71+00 to 127+00 Page 19

Grade For P.-T. Page 27

COMPLETED CROSS SECTIONS ON GARVEY-NEAL Page 66

CONS. ELE. of G.-N. + P.-T. 1971+72 Page 19-51

B.M. #7 = 75.17, NE. corner of culvert on S.R. 267

B.M. #8 = 74.34, Nail in utility pole N.W. corner of 267+200N.

B.M. #9 = 66.63, top of iron rail, N.E. corner of bridge on 151N.

B.M. #10 = 57.49 SE. corner of concrete abactment in Sugarwood Estates.

B.M. #11. = 18.95 N.E. corner of concrete abactment on 100N.

	+	π	−	B.M.
				57.49
B.M.#10	5.71	63.20	5.20	58.00
182+00				
T.P.	5.41	63.41	5.97	57.44
184+00				
T.P.	4.85	62.29	4.85	57.44
186+00				
T.P.	6.12	63.56	4.70	58.86

Cross sections drawn for each 400' ℄ of length

RWH
8-19-69

9' STK	8'	5'		5'	14'	15'
6.52	7.29	10.91	11.46	11.16	8.03	7.95
56.68	55.91	52.29	51.74	52.04	55.17	55.25

10'	15'	18'	21'		25'	20'
7.11	6.85	6.75	5.40		7.71	7.73
56.09	56.35	56.45	57.80		55.49	55.47

		25'
		5.40
		57.80

15'	9' STK	4'		3'	4'	6'
5.12	6.60	10.54	11.06	10.40	9.90	9.29
58.29	56.81	52.87	52.35	53.01	53.51	54.12

20'	25'		25'	20'	15'	10'
5.20	5.29		7.77	7.55	7.74	8.76
58.21	58.12		56.64	55.86	55.67	54.65

13'	6' STK	3'		5'	10'	15'
5.24	5.64	7.67	7.90	7.40	3.15	2.78
57.05	56.65	54.62	54.39	54.89	59.14	59.51

15'	20'	25'		21'	20'	17'
5.06	5.00	5.06		2.67	2.60	2.64
57.23	57.29	57.23		59.62	59.69	59.65

	+	π	−	B.M.
188+00				
T.P.	5.24	64.10	3.65	60.45
190+00				
T.P.	5.34	65.79	1.92	63.87
192+00				
B.M.#9	4.93	68.80	2.06	66.74

8' STK 7' 5' 4' 7' 10'
2.90 6.55 8.05 8.12 7.96 7.24 4.96
57.66 57.01 55.51 55.44 55.60 56.32 58.60

10' 15' 20' 25' 25' 20' 15'
6.37 6.27 5.97 6.02 2.15 2.68 3.63
57.19 57.29 57.59 57.54 61.41 60.88 59.93

9' STK 7' 3' 2' 5' 8'
9.27 7.43 8.27 8.52 8.45 6.45 2.30
59.93 56.67 55.83 55.58 55.65 57.65 61.80

9' 10' 15' 20' 15' 10'
4.90 4.92 5.53 5.35 0.32 1.69
59.20 59.18 58.57 58.75 63.78 62.41

25'
5.52
58.58

10' 7' 2' 2' 3' 5'
8.46 8.96 8.42 9.54 9.27 9.01 5.69
57.33 56.83 56.37 56.25 56.52 56.79 60.10

14' STK 14' 15' 20' 20' 15' 11'
5.31 5.90 5.77 5.50 0.49 2.15 4.01
60.48 59.89 60.02 60.29 65.30 62.94 61.78

25'
5.54
60.25

	+	π	−	B.M.
B.M.#9	2.57			66.63
T.P.	2.57	69.20	4.20	65.00
T.P.	2.87	67.87	5.87	62.00
194+00				
T.P.	4.94	66.94	3.94	63.00
196+00				
T.P.	5.25	69.25	4.56	63.69
198+00				

8'STK 8' 2' 1' 4' 6'
6.17 6.68 10.55 10.99 10.90 10.39 9.31
61.74 61.19 57.32 56.88 56.97 57.48 58.56

10' 15' 20' 25' 25' 20' 15' 10'
6.64 6.78 6.87 6.48 2.23 6.98 7.07 7.60
61.23 61.09 61.00 61.39 60.64 60.89 60.80 60.27

8'STK 2' 3' 11' 15'
5.52 9.08 9.48 8.98 7.27 6.54
61.42 57.86 57.46 57.96 59.67 60.40

9' 10' 15' 20' 25' 20'
5.02 4.87 4.91 4.88 6.25 6.59
61.92 62.07 62.03 62.06 60.69 60.36

25'
4.82
62.12

13' 10 2' 3' 5' 25'
5.95 7.38 8.45 9.02 8.26 5.99 5.37
62.30 60.87 59.80 59.23 59.99 62.26 62.88

12'STK 25'
5.22 5.29
63.03 62.96

	+	π	−	B.M.
T.P.	5.27	68.96	4.37	64.59
20+00				
T.P.	4.41	69.00	4.44	64.56
20+00				
T.P.	5.15	69.71	4.23	65.48
20+00				

℄

10' 6' 4' 2' 5' 8'
1.88 8.32 8.98 9.49 9.09 8.12 5.32
61.08 60.64 59.98 59.47 59.87 60.84 63.64

13' 15' STK 15' 25' 20' 15' 10'
6.66 6.12 6.53 0.76 2.29 3.65 4.93
62.30 62.84 62.43 68.20 66.67 65.31 64.13

25' 20'
5.96 6.32
63.00 63.64

9' STK 7' 4' 6' 10' 15'
5.07 5.90 8.76 9.03 8.77 5.49 4.26
63.93 63.10 60.24 59.97 60.23 63.51 64.74

10' 15' 20' 25' 20'
5.70 5.55 4.67 2.69 3.27
63.30 63.45 64.33 66.31 65.73

25'
4.62
64.39

9' 5' 2' 1' 5' 10'
5.52 7.50 8.57 8.74 7.47 5.64 5.62
64.17 62.21 61.14 60.97 62.24 64.07 64.09

9' STK 10' 15' 25' 20' 15'
4.62 5.36 5.16 4.75 4.92 5.39
60.09 64.35 64.55 64.76 64.59 64.32

25' 20'
4.90 4.87
64.81 64.84

	+	⊼	−	D.17.
T.P.	5.00	70.48	3.96	66.52
206+00				
T.P.	4.65	71.17	4.07	67.10
208+00				
T.P.	5.08	72.18	4.35	67.83
210+00				

7' 5.87 64.61 — 1' 8.88 61.60 — 8.94 61.54 — 1' 8.82 61.66 — 3' 7.29 63.19 — 5' 6.95 63.53

9' STK 4.78 65.70 — 10' 5.21 65.27 — 25' 5.12 65.36 — 15' 4.92 65.55 — 20' 4.92 65.56

25' 2.26 68.22 — 20' 3.86 66.62 — 15' 4.84 65.63 — 10' 5.63 64.85

5' STK 5.84 65.33 — 5' 6.51 64.66 — 8.57 62.60 — 6' 8.23 62.94 — 10' 7.75 63.42 — 14' 5.74 65.43

10' 5.44 65.73 — 15' 4.84 66.32 — 30' 4.75 66.42 — 25' 4.68 66.49

25' 5.68 65.49 — 20' 5.65 65.52

10' 7.69 64.49 — 5' 8.41 63.77 — 9.06 63.12 — 2' 8.67 63.51 — 3' 7.56 64.62

10' STK 7.11 65.07 — 15' 6.84 65.34 — 20' 5.24 66.94 — 25' 5.22 66.96

20' 4.89 67.29 — 25' 3.16 69.02 — 15' 5.53 66.66 — 10' 5.77 66.41

	+	x	−	Elev.	
T.P.	5.16	72.99	0.63	72.36	
212+00					
B.M.#8	6.33	78.69	4.05	74.64	-74.34

8' STK	6'	2'		2'	5'	10'
6.12	7.04	8.89	9.34	8.93	5.37	5.13
66.87	65.95	64.10	63.65	64.06	62.62	67.86
10'	15'	20'	25'	25'	20'	15'
6.23	5.63	5.49	4.87	4.61	4.83	4.84
66.76	67.36	67.50	68.12	68.38	68.16	68.15

	+	∝	−	B.M.
B.M.#8	3.95			74.34
T.P.	3.95	78.29	10.67	67.62
T.P.	5.19	72.81	2.18	70.63
214+00				
216+00				
T.P.	3.72	74.35	3.76	70.59
218+00				

℄

6' 4' 2' 6' 12' 18'
6.45 7.72 8.18 8.30 8.05 5.68 4.12
66.36 65.09 64.63 64.51 64.76 67.13 68.69

10' 10'STK 15' 25' 20'
5.35 4.84 5.58 4.13 4.07
67.46 67.97 67.23 68.68 68.74

25' 20'
4.49 4.29
68.32 68.52

9' 9'STK 3' 3' 6' 11'
4.89 4.34 7.65 7.95 7.77 6.33 4.00
67.92 68.47 65.16 64.86 65.04 66.48 68.81

10' 15' 20' 25' 25' 20' 15'
4.83 4.70 4.55 4.47 4.33 4.28 4.19
67.98 68.11 68.26 64.34 68.48 68.53 68.62

10' 5' 3' 2' 6' 10'
6.55 8.63 4.67 9.07 8.49 5.24 5.61
67.80 65.72 65.68 65.32 65.86 69.11 68.74

10'STK 15' 20' 25' 20' 15'
6.04 6.39 6.11 5.09 5.02 5.73
68.31 67.96 68.24 69.26 69.03 68.62

25'
5.99
68.36

	+	π	−	B.M.
T.P.	5.38	75.97	5.89	70.08
22400				
B.M.#7	5.85	75.93	0.76	75.17	75.17
22200				

℄

6' STK	5'	2'		9'	10'	15'
6.07	7.00	9.52	10.27	9.76	8.20	7.05
69.90	68.97	66.40	65.70	66.21	67.77	68.92
10'	15'	20'	25'	25'	20'	
6.69	6.71	6.89	6.40	4.91	5.11	
69.28	69.26	69.68	69.57	71.06	70.86	

10'	6'	3'		3'	6'	12'
7.02	8.08	8.91	9.31	9.07	6.96	4.79
68.86	67.85	67.02	66.62	66.86	68.97	71.14
10' STK	15'	25'		25'	20'	15'
6.51	6.63	5.30		4.79	5.02	4.86
69.42	69.30	70.63		71.14	70.91	71.07

	+	+	-	B.M.
B.M.#7	0.53			75.17
T.P.	0.53	75.70	3.98	71.72
224+00				
T.P.	5.20	76.92	4.08	72.84
226+00				
T.P.	5.06	77.90	4.80	73.10
228+00				

℄

12' STK 12' 7' 8.71 4' 12' 15'
3.55 4.25 8.32 8.72 4.42 3.52
72.15 71.45 67.33 66.99 66.98 71.28 72.18

15' 20' 25' 25' 20'
4.30 4.52 4.77 2.96 2.80
71.40 71.13 71.33 72.74 72.90

9' 3' 7' 9.27 2' 6' 10'
4.84 8.82 9.18 9.10 6.56 5.90
72.08 68.10 67.74 67.65 67.82 70.36 71.02

11' STK 15' 20' 25' 20' 15'
4.13 5.43 5.51 4.49 5.01 5.99
72.79 71.49 71.41 72.43 71.91 70.93

25'
5.36
71.56

8' STK 8' 1' 10.05 7' 10' 15'
3.53 4.07 9.67 9.72 6.55 5.87
74.32 73.83 68.23 67.95 68.18 71.17 72.03

10' 15' 20' 25' 25' 20'
4.84 5.36 5.65 5.64 5.64 5.34
73.46 72.54 72.25 72.26 72.26 72.56

	+	∧	−	B.M.
T.P.	5.07	78.17	4.56	73.61
230+00				
T.P.	5.13	78.74	2.50	76.24
232+00				
T.P.	6.22	82.46	8.77	73.69
234+00				

13' 4.75 → 73.42
6' 6.90 → 71.27
3' 9.23 → 68.44
10.01
68.16
5' 9.40 → 68.77
10' 6.14 → 72.03
15' 5.09 → 73.08
13' STK 4.10 → 74.07
15' 5.01 → 73.16
20' 5.21 → 72.96
25' 5.00 → 73.17
25' 4.33 → 73.84
20' 4.36 → 73.81

14' 5.29 → 73.45
7' 7.23 → 71.51
3' 9.00 → 69.74
9.24
69.50
4' 9.08 → 69.66
8' 7.51 → 71.19
12' 5.26 → 73.48
14' STK 4.75 → 73.94
20' 5.40 → 73.34
25' 1.45 → 73.29
14' 3.19 → 75.53

Fence at 6'

9' 10.79 → 71.67
3' 12.02 → 70.43
12.12
70.34
3' 12.11 → 70.35
6' 10.06 → 72.40
9' 7.77 → 74.69
13' 10.41 → 72.05
18' 8.85 → 73.61
23' 5.36 → 77.10
25' STK 5.01 → 77.45
25' 8.19 → 74.27
20' 8.11 → 74.35
15' 7.97 → 74.49
10' 7.61 → 74.85

	+	x	−	B.M.
234+42 = 144+81 original				
T.P.	4.28	77.97	5.97	72.00
B.M.	4.90	76.90	1.58	75.32

℄

15'	10'	5'		4'	8'	10'
8.23	10.91	10.95	12.38	10.87	10.14	9.91
74.23	71.55	71.51	70.08	71.59	72.32	72.55
20'	25'	22'50"K				15'
5.06	4.88	4.15				9.40
77.40	77.56	78.31				73.06

use to here

	+	^	=	B.M.
B.M #0 STA 180+50	5.16	62.65		57.49
B.M #8	3.13	77.47		74.34

N.E.

11.45
51.20

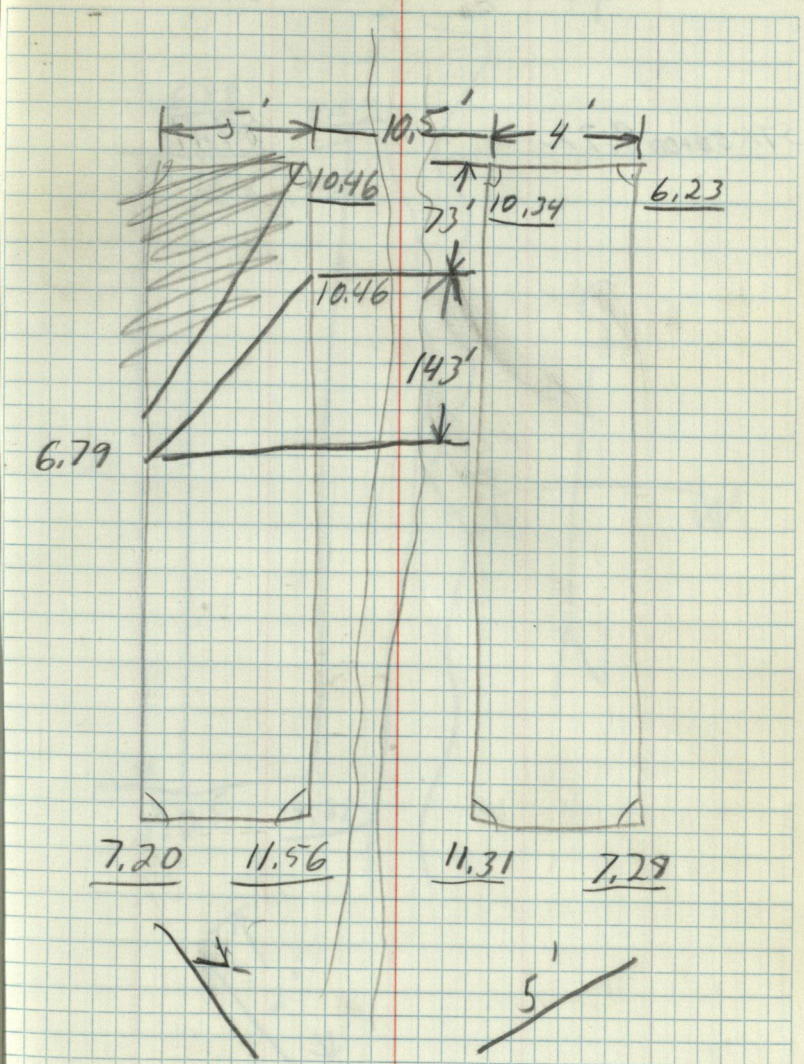
13.38
64.09

S.E.

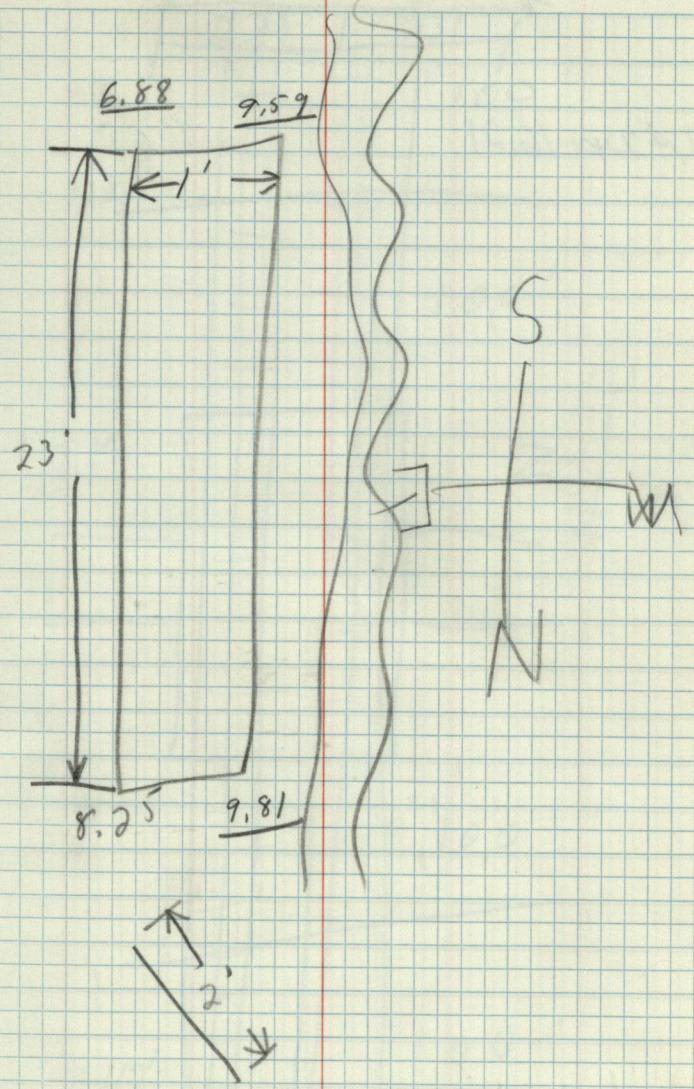
12.21
50.44

13.21
64.26

	+	↑	−	B.M.
STK 13+00	3.60			82.38

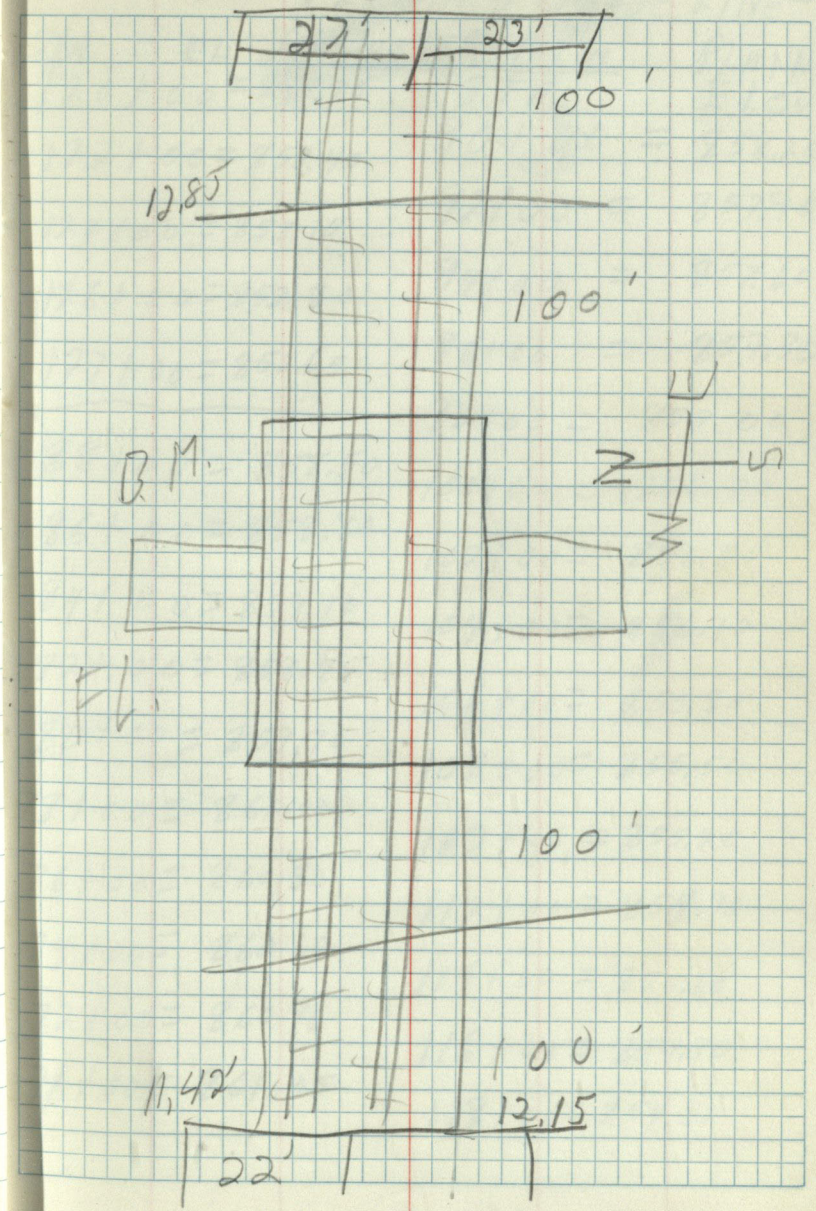


	+	↗	−	F.L. B.M.
STK 50+00	9.72			89.11



	+	±	−	B.M.
STA. 7200	16.21			4.60

11.85 11.74 18



Planned Grade Line

Grade 0.15" Per 100'

Sta. = El.	Sta.	Planned Elev.
120+00 = 853.70	90+00	= 858.20
122+00 = 853.40	92+00	= 857.90
124+00 = 853.10	94+00	= 857.60
126+00 = 852.80	96+00	= 857.30
127+00 = 852.65	98+00	= 857.00
88+00 = 858.50	100+00	= 856.70
86+00 = 858.80	102+00	= 856.40
84+00 = 859.10	104+00	= 856.10
82+00 = 859.40	106+00	= 855.80
80+00 = 859.70	108+00	= 855.50
78+00 = 860.00	110+00	= 855.20
76+00 = 860.30	112+00	= 854.90
74+00 = 860.60	114+00	= 854.60
72+00 = 860.90	116+00	= 854.30
71+00 = 861.05	118+00	= 854.00

Garvey - Neal
Grade Plan

STA.	El.	STA.	El.
0.125" Per 100'			
71+00 =	861.05		
70+00 =	861.175		
68+00 =	861.425		
66+00 =	861.675		
64+00 =	861.925		
62+00 =	862.175		
60+00 =	862.425		
58+00 =	862.675		
56+00 =	862.925		
54+00 =	863.175		
52+00 =	863.425		
50+00 =	863.675		
	863.68		

	+	π	−	El.	Cut
T.B.m #6				863.85	
	~~2.59~~	~~866.44~~			
	5.65	869.50			
T.B.M. 6A.			4.09	865.41	
~~ON top of STAKE~~			5.38	864.12	
92+00	~~Grade Line~~			857.90	6.22
94+00			6.98	862.52	
				857.60	4.92
96+00			4.91	864.59	
				857.30	7.29
⊙			4.91	864.59	
	2.95	867.54			
98+00			3.75	863.79	
				857.00	6.79

8-5-71

A2. π
JOHN ϕ

21

Top of N.E. Corner of Bridge Abutment Over Garvey - Near Ditch At Co. Rd. 300 N. & of Co. Rd. 300 N. Sta. 90+05

T.B.M. #6A: N.E. Cor. of Conc. Slope To Service Door of Carr. Mrs. Wing House

8-5-71
G.+N.

STA.	+	π	−	El.	Cut
		867.54			
100+00			4.32	863.22	
				856.70	6.52
102+00			4.14	863.40	
				856.40	7.00
104+00			5.37	862.17	
				856.10	6.07
⊙			5.37	862.17	
	4.71	866.88			
106+00			4.83	862.05	
				855.80	6.25
108+00			5.98	860.90	
				855.50	5.40
		Return			
108+00				860.90	
	5.34	866.24			
			1.97	864.27	
	8.47	872.74			
			6.34	866.40	
	3.14	869.54			
BM 6			5.65	863.89	V

G.&N. Steve - AL - Steve 23

DATE 8-12-71

STA.	+	π	−	El.	Cut
106+00				862.05	
	4.07	866.12			
108+00			5.31	860.81	
				855.50	5.31
110+00			6.15	859.97	
				855.20	4.77
112+00			5.39	860.73	
				854.90	5.83
⊙			5.39	860.73	
	3.58	864.31			
114+00			4.26	860.05	
				854.60	5.45
116+00			4.22	860.09	
				854.30	5.79
118+00			4.92	859.39	
				854.00	5.39

Sta.	+	π	−	El.	Cut
		864.31			
⊙			4.92	859.39	
	5.40	864.79			
120+00			5.81	858.98	
				853.70	5.28
122+00			6.41	858.38	
				853.40	4.98
124+00			6.56	858.23	
				853.10	5.13
126+00			7.54	857.25	
				852.80	4.45
	Return				
120+00				858.98	
	5.55	864.53			
⊙			5.73	858.80	
	6.85	865.65			
⊙			6.21	859.44	
	6.20	865.64			
106+00			3.66	861.98	
				✓ AL	

G.t.N.

6.41
4.98
11.39

5.26
5.61
11.09

862.05
861.96
.09

G.+N. 8-18-71

AL
Steve
Steve

Sta	+	=	−	El.	Cut
B.M.6				863.85	
	5.69	869.54			
88+00			4.57	864.97	
				858.50	6.47
86+00			3.72	865.82	
				858.80	7.02
⊙			4.40	865.14	
	5.88	871.02			
84+00			5.27	865.75	
				859.10	6.65
⊙			6.24	864.78	
	6.92	871.70			
82+00			5.64	866.06	
				859.40	6.66
80+00			5.63	866.07	
				859.70	6.37

Sta	+	↑	−	El.	Cut
		871.70			
78+00			4.97	866.73	
				860.00	6.73
76+00			5.07	866.63	
				860.30	6.33
⊙			5.41	866.29	
	6.78	873.07			
74+00			5.11	867.96	
				860.60	7.36
72+00			5.22	867.85	
				860.90	6.95
	Return				
⊙			5.45	867.62	
	5.15	872.77			
⊙			7.30	865.47	
	5.69	871.16			
B.M.6			7.04	864.12	
			✓	AL.	

G. + N.

	+	H	−	EL	Cut
T.B.M.#2				863.95	
	1.80	865.75			
112+00			5.67	860.08	
110+00			4.98	860.77	
108+00			4.40	861.35	
106+00			3.23	862.07	
				855.37	6.65
⊙			5.30	860.45	
	7.46	867.91			
104+00			4.65	863.26	
				855.65	7.61
102+00			4.70	863.21	
				855.93	7.28
⊙			5.36	862.55	
	6.23	868.78			

P.I.T.

TOP OF S. CONCRETE GATE POST at JUNCTION OF NS & EW FENCE

855.37
.28
855.65
.28
855.93

V.A.

	+	Π	−	EL	Cut
		868.78			
100+00			5.24	863.54	
				856.21	7.33
98+00			5.52	863.26	
				856.49	6.77
96+00			5.06	863.72	
				856.77	6.95
94+00			4.27	864.51	
				857.05	7.46
⊙			4.27	864.51	
	5.16	869.67			
92+00			4.90	864.77	
				857.33	7.44
TBM #2A			4.75	864.92	
			✓ AZ		

P. & T.

20 PENNY NAIL IN ROOT ON SW CORNER OF OAK TREE AT STA 92+50

	+	π	−	EL	Cut
TBM #2A				864.92	
	3.98	868.90			
90+00			4.86	864.04	
				857.61	6.43
88+00			3.71	865.19	
				857.89	7.03
86+00			4.16	864.74	
				858.17	6.57
ⓓ			5.50	863.40	
	7.26	870.66			
84+00			5.75	864.91	
				858.45	6.46
82+00			4.75	865.91	
				858.73	7.18
TBM #3P			3.57	867.09	
				(867.08)	

Pt. 9-2-71

Al π
Steve Φ

29

TBM 3P. 867.08

	+	↑	−	EL	Cut
~~TBM #3P~~		870.66		~~869.09~~	
80+00			5.04	864.92	
				859.01	5.91
78+00			5.55	865.11	
				859.29	5.82
⊙			5.55	865.11	
	5.00	870.11			
76+00			4.18	865.93	
				859.57	6.36
74+00			4.29	865.82	
				859.85	5.97
72+00			4.72	865.39	
				860.13	5.26
⊙			4.72	865.39	
	4.45	869.84			

P.I.T.

P.I.T.

	+	I	−	El.	Cut
		869.84			
70+00			4.07	865.77	
				860.41	5.36
68+00			3.32	866.52	
				860.69	5.83
⊙			3.32	866.52	
	5.70	872.22			
66+00			5.78	866.44	
				860.97	5.47
64+00			5.38	866.84	
				861.25	5.59
⊙			6.65	865.57	
	6.59	872.16			
62+00			4.70	867.46	
~~T.B.M.~~				861.53	5.93
4-P			4.51	867.65	
				(867.71)	

	+	℄	−	EL	Cut
62+00				867.46	
	4.02	871.48			
TBM #4P-A			4.31	867.17	
60+00			4.62	866.86	
				861.76	5.10
⊙			5.35	866.13	
	5.87	872.00			
58+00			4.97	867.03	
				861.96	5.07
56+00			4.73	867.27	
				862.16	5.11
54+00			5.03	866.97	
				862.36	4.61

P.I.T. 9-10-71 STEVE ℄ AL ⊙ JOHN WILSON ⊙ 32

883.83 = 21+00 ⅀ .18"

867.05 = 0+00

867.644 Arm A.

867.05
− .36
866.69 = 2+00
.36
866.33 = 4+00

873.84
866.33
7.51

	+	∧	−	EL	Cut
52+00			4.85	867.15	
				862.56	4.59
⊙			5.17	866.83	
	5.19	872.02			
50+00			4.33	867.69	
				862.76	4.93
48+00			4.23	867.29	
				862.96	4.33
⊙			4.96	867.06	
	6.79	873.85			
46+00			6.06	867.79	
				863.16	4.63
44+00			5.37	868.48	
				863.36	5.12
42+00			2.70	871.15	
				863.56	7.59

P+T.

R.F.T

	+	↗	−	EL	CUT
40+00			1.90	871.95	
				863.76	8.19
⊙			1.90	871.95	
	4.19	876.14			
38+00			3.57	872.57	
				863.96	8.61
36+00			4.95	871.19	
				864.16	7.03
34+00			5.69	870.45	
				864.36	6.09
⊙			6.54	869.60	
	9.47	879.07			
⊙			9.17	869.90	
	5.45	875.35			
TBM #6-P			4.24	871.11	
				(871.38)	

	+	π	−	El.	Cut
T.B.m.#5-P	3.23	873.34		870.11	
T.B.m.#5-PA			0.40	872.94	
TBM#5-PA				872.94	
	0.15	873.09			
47+00			5.24	867.85	
				863.06	4.79
46+00			5.23	867.86	
				863.16	4.70
45+00			5.27	867.82	
				863.26	4.56
44+00			4.62	868.47	
				863.36	5.11

9-22-71

π JOHN
Φ AL

S.W. Cor. of Porch at Mitscher House
At Sta 47+00

9-24-71

π STEVE
Φ JOHN

	+	π	−	EL	Cut
⊙			4.62	868.47	
	7.90	876.37			
43+00			5.91	870.46	
				863.46	7.00
42+00			5.65	870.72	
				863.56	7.16
41+00			5.30	871.07	
				863.66	7.41
40+00			4.22	872.15	
				863.76	8.39

STEVE π
9-30-71 AL ϕ

	+	π	−	EL	Cut
IBM# 68				871.38	
	3.52	874.90			
32+00			4.19	870.71	
				864.56	6.15
30+00			4.62	870.28	
				864.76	5.52
28+00			4.80	870.10	
				864.96	5.14
26+00			4.67	870.23	
				865.17	5.07
⊙			4.67	870.23	
	6.27	876.50			
24+00			5.00	871.50	
				865.36	6.14
22+00			4.72	871.78	
				865.56	6.22

	+	π	−	EL	Cut
20+00			4.57	871.93	
				866.80	5.13
18+00			3.91	872.59	
				867.10	5.49
⊙			3.91	872.59	
	4.73	877.32			
16+00			4.22	873.10	
				867.40	5.70
14+00			4.68	872.64	
				867.70	4.94
12+00			4.39	872.93	
				868.00	4.93
⊙			4.39	872.93	
	5.08	878.01			
10+00			5.29	872.72	
				868.30	4.42

15% Grade From
Sta. 22+00 to End

	+	π	−	EL	Cut
8+00			4.42	873.59	
				868.60	4.99
⊙			5.32	872.64	
	5.90	878.59			
6+00			5.26	873.33	
				868.90	4.43
4+00			4.61	873.98	
				869.20	4.78
2+00			4.36	874.23	
				869.50	4.73
TBM #			4.60	873.99	

ARM A GARVEY-NEAL 11-2-71

	+	⇑	−	EL	
TBM #3				873.48	
	9.30	882.78			
29+00				875.93	
				871.83	4.10
28+00				876.23	
				871.70	4.53
27+00				875.78	
				871.58	4.20
26+00				876.28	
				871.45	4.83
25+00				877.08	
				871.33	5.75
⊙			5.84	876.94	
	5.61	882.55			
24+00				876.60	
				871.20	5.40
23+00				876.40	
				871.08	5.32

℄ STAKE

9.81	872.97	6.85 875.93
9.88	872.90	6.55 876.23
9.93	872.85	7.60 875.78
10.37	872.41	6.50 876.28
10.48	872.30	5.70 877.08
10.44	872.11	5.~~85~~ 876.60
10.34	872.21	6.15 876.40

	+	882.55 H	−	EL	Cut
22+00				876.20	
				870.95	
					5.25
21+00				876.97	
				870.83	6.14
20+00				877.67	
				870.65	7.02
⊙			7.46	875.09	
	4.17	879.26			
19+00				875.09	
				870.47	4.62
18+00				874.41	
				870.29	4.12
17+00				874.25	
				870.11	4.14
16+00				873.64	
				869.93	3.51
15+00				873.12	
				869.75	3.37

℄ Arm A

41

	STAKE
10.72	6.35
871.83	876.20
11.19	5.58
871.36	876.97
11.66	4.88
870.89	877.67
8.21	4.17
871.05	875.09
8.24	4.85
871.02	874.41
8.30	5.01
870.96	874.25
8.30	5.62
870.96	873.64
8.40	6.14
870.86	873.12

	819.26 +	ft	−	EL	Cut
14+00				873.73	
				869.57	4.16
13+00				874.14	
				869.39	4.75
⊙			4.68	874.58	
	4.34	878.92			
12+00				873.28	
				869.21	4.07
11+00				873.84	
				869.03	4.81
10+00				873.50	
				868.85	4.65
9+00				873.41	
				868.67	4.74
⊙			7.19	871.73	
	5.27	877.00			

℄ ARM A

42

	STAKE
8.49	5.53
870.77	873.73
8.52	5.12
870.74	874.14
8.02	5.64
870.90	873.28
8.19	5.08
870.63	873.84
8.16	5.42
870.76	873.50
8.23	5.51
870.69	873.41

	+	877.00 Π	−	EL	Cut
8+00		877.00		872.25	
				868.49	3.76
7+00				872.92	4.61
				868.31	
6+00				872.65	4.52
				868.13	
5+00				872.66	4.71
				867.95	
4+00				867.77	
				873.53	5.76
~~BM~~ ①			3.83	873.17	
	6.23	879.40			
B.m. #2			6.54	872.86	

℄ Arm A. 43

	STAKE
6.40	4.15
870.60	872.25
6.33	4.08
870.67	872.92
6.52	4.35
870.48	872.65
6.61	4.34
870.39	872.66
6.48	3.47
870.52	873.53

G-N. STA. 71+00 to 60+00

1-19-71 Steve π Al ϕ

	+	π	−	El.	cut
T.B.m.#5				866.42	
	11.29	877.71			
71+00			10.22	867.49	
				861.05	6.44
70+00			9.70	868.01	
				861.18	6.83
68+00			9.61	868.10	
				861.43	6.67
⊙			9.61	868.10	
	4.66	872.76			
66+00			5.67	867.09	
				861.68	5.41
64+00			4.71	868.05	
				861.93	6.12
62+00			4.00	868.76	
				862.18	6.58
60+00			3.55	869.21	
				862.43	6.78

0.125 = 50+00 = 863.68
.10 = 50+00

G-N 12-8-71
A2-π Steve ϕ

	+	π	−	El	Cut
62+00				868.76	
	5.11	873.87			
58+00			4.90	868.97	
				862.68	6.21
⊙			4.90	868.97	
	4.18	873.15			
56+00			4.74	868.41	
				862.93	5.48
54+00			3.51	869.64	
				863.18	6.46
52+00			2.31	870.84	
				863.43	7.41
⊙			2.31	870.84	
	4.07	874.91			
50+00			4.20	870.71	
				863.68	7.03

	+	℄	−	El.	Cut
		874.91			
48+00			4.34	870.57	
				863.88	6.69
46+00			4.82	870.09	
				864.08	6.01
T.B.M.			8.99	873.97	
TBM	.83	874.75			
T.O.S. 46+00			4.85	869.90	
44+00			4.53	870.27	5.94
				864.28	
42+00			3.80	870.95	
				864.48	6.47
40+00			3.89	870.86	
				864.68	6.18

Top of fence post East side ditch
At 48+65

	+	↑	−	EL	
⊙			3.89	870.86	
	5.30	876.16			
38+00			5.06	871.10	
				864.88	6.22
36+00			5.32	870.84	
				865.08	5.76
34+00			3.81	872.35	
				865.28	7.07
32+00			3.37	872.79	
				865.48	7.31
30+00			5.13	871.03	
				865.68	5.35
⊙			5.13	871.03	
				~~865.88~~	
	5.14	876.17			
28+00			4.22	871.95	
				865.88	6.07

	+	℄	−	EL	
26+00			3.58	872.59	
				866.08	6.51
				(870.52)	
T.B.M.#4					
5.71	℄ CULVERT N END			870.46	
	C.M.P. AT Co. Rd. 400 N.				
5.64	S END			870.53	

EL. 866.08 AT STA. 26+00

	+	π	−	El	Cut
T.B.M. #4				870.52	
	6.59	877.11			
24+00			4.03	873.08	
				866.28	6.80
				~~866.42~~	~~6.66~~
22+00			2.01	875.10	
				866.48	8.62
				~~866.76~~	~~8.34~~
20+00			3.06	874.05	
				866.68	7.37
				~~867.10~~	~~6.95~~
⊙			3.06	874.05	
	5.33	879.38			
18+00			5.66	873.72	
				866.88	6.84
				~~867.44~~	~~6.28~~
16+00			5.40	873.98	
				867.08	6.90
				~~867.78~~	~~6.20~~
14+00			3.11	876.27	
				~~867.68~~	~~5.59~~
				867.52	5.75

1-19-72 G-N

Al-π

Steve ϕ

~~22%~~ New Grade From Sta. 16+00 to 0+00

10% Grade

866.68 AT Sta. 26+00

~~867.08~~ AT Sta. 16+00

~~871.88 AT Sta 0+00~~

~~30% Grade~~

16+34

℄ of Pitch going EAST ARMA

	+	π	−	El.	
		879.38			
12+00			4.31	875.07	
				~~868.28~~	~~6.79~~
				867.96	7.11
0			4.31	875.07	
	3.28	878.35			
10+00			3.84	874.51	
				~~868.88~~	~~5.63~~
				868.40	6.11
8+00			4.09	874.26	
				~~869.48~~	~~4.78~~
				868.84	5.42
6+00			3.33	875.02	
				~~870.64~~	~~3.91~~
				869.28	5.74
4+00			3.54	874.81	
				~~870.68~~	~~4.13~~
				869.72	5.09
⊙			3.54	874.81	
	4.74	879.55			

	+	π	—	El.	
2+00			4.06	875.49	
				~~871.28~~	~~4.21~~
				870.16	5.33
0+00			3.40	876.15	
				~~871.88~~	~~4.27~~
				870.60	5.55
T.B.M. #1			3.88	875.67	
				(875.45)	

Arm A.

T.B.M. #2				872.68	
	5.34	878.02			
2+00			4.18	873.84	
				867.55	6.29
				~~868.04~~	~~5.80~~
0+00			3.88	874.14	
				867.05	7.09
				~~867.78~~	~~6.36~~

4.00' Top Headwall to Bottom of 12" C.M.P. At 0+00

Elv. top of Headwall 875.45
− 4.00
Elc. Bot. C.M.P. 871.45

0+00 Elc. Bot. Ditch

3+32 Bot. Ditch Elc. 868.21

867.05 At Sta. 0+00

867.88 At Sta. 3+32

2.83

872.68 Top C.M.P.
867.88 Elc. Bot. Ditch
4.80 Cut At 800 f. off C.M.P.

	+	℄	—	El.
T.B.M. #2				872.68
	6.06878.74			
T.B.M. #2A			4.19	874.55

Spike W. side of Power Pole
At Bennette Drive

	+	℄	—	EL
				866.01
STA				
80+00	5.70	871.77		

ONE 18' HCMP AT STA ON R.

ONE 8' HCMP AT STA 80+65 ON L.
ONE 30' CMP AT STA 81+35 ON L

84+00 4.55

ONE 18' CMP AT STA 86+00 ON R.
ONE 6' CMP AT STA 86+00 ON L.

℄ AL
℄ STEVE 9-14-71

CROSS SECTION ON COMPLETED DITCH. GARVEY-NEIL

℄
HI

L					TOB	R
+26	+16	+2	80+00	+2	+12	+30
5.50	5.75	12.06	12.39	12.18	6.05	5.58
866.27	866.02	859.71	859.38	859.59	865.72	866.19
—	—	—	+46	+55	+65	
			5.76	6.31	6.69	
			866.01	865.46	865.08	

+25	+14	+2	84+00	+2	+12.5	+25
4.75	5.46	11.12	11.30	11.24	5.42	5.20

+40	+50	+
5.66	5.99	

	+	Π	−	EL
78+00	5.361			

L ℄ R

+25	+12	+2	78+00	+2	+15	+25
5.52	6.14	11.54	11.66	11.64	5.75	5.51

L	+	+50
		6.54

	+	π	−	El
BM #5P				870.11
	3.21	873.32		

P.T. ALONG ℄ ALT
@ 1300N.

L

47+63			
+5 E. of Bridge	+4	+12	+30
8.45	8.20	7.80	6.43	6.18
846.87	865.12	865.52	866.89	867.14

Steve ℗

R

+50
5.70
867.62

+8 T.O.B.	+3	47+00	+1	+5	+25
6.12	7.96	8.56	8.15	6.93	6.44
867.20	865.36	864.76	865.17	866.39	866.88

+20 T.O.B.
5.52
867.80

+50
6.03
867.29

+15 ℄ of R.	+5 T.O.B.	+2	46+00	+1	+8	+20
5.45	5.89	7.95	8.39	8.11	6.40	6.32
867.87	867.43	865.37	864.93	865.21	866.92	867.00

+50
6.21
867.11

℄ +15	+5 T.O.B.	+3	45+00	+5	+8	+13
5.27	5.89	7.77	7.93	7.87	6.47	5.94
868.05	867.45	865.55	865.39	865.45	866.85	867.38

+85
6.15
867.17

+50
6.10
867.22

	+	π	−	EL
HI (1)			5.42	867.90
	8.20	876.10		

L C R

HI (1)

+18	+7	+1	44+00	+4	+8	+10
7.43	2.85	10.65	10.86	10.49	7.01	7.44
868.67	868.25		865.24	865.61	869.09	868.66
		865.45				

+25	+50
7.65	7.45
868.45	868.65

+18	+8	+4	43+00	+2	+8	+25
6.05	6.47	10.70	10.80	10.70	6.31	6.10
870.05	869.63		865.30	865.40	869.79	870.00
		865.40				

FENCE

+50
6.25
869.85

+18	+8	+3	42+00	+3	+10	+25
5.16	5.39	10.40	10.85	10.59	5.29	5.44
870.94	870.71		865.25	865.53	870.81	870.66
		865.70		FENCE		

+47
5.91
870.19

+20	+8	+2	41+00	+2	+9	+25
5.06	5.50	10.12	10.52	10.00	5.20	5.18
871.04		865.98	865.58	866.10	870.90	870.92
	870.60					

+48
5.61
870.49