

W708

ENGINEERS'  
LEVEL BOOK  
No. 412F

#708

## DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1.

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be  $30.6 + (20 - 16) \div 2$  or 2 ft. added to 30.6 = 32.6. For slopes of 1 on 1½ see inside of back cover.

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Spring line offsets East Portal to Rib #50 11/7/47  
75-76

Rib Elevs East Portal to Rib #50 11/7/47  
74

Check Levels

P.B.#	5.45	553.73	548.28
-4		+1.83	555.56
+14		+1.40	555.13
15		+1.40	.13
16		+1.33	.06
17		+1.50	.23
18		+1.52	.25
19		+1.59	.32
20		+1.54	.27
21			
22		+1.49	.22
23		+1.42	.15
24			
25		+1.57	.30
26		+1.42	.15
27		+1.31	.04
28		+1.32	.05
29		+1.48	.21

55373

2

30	+1.45	555.18
31	+1.54	.27
33	+1.51	.24
34	+1.65	.38
35	+1.72	.45
41	+1.99	.69
42	+2.00	.73
43	+2.07	.80
44	+1.89	.62
45	+2.04	.77
46	+2.05	.78
47	+2.03	.76

distances  $\pm$   
to Springline

12-13-46  
clear-warm

Nelson  
Leonard  
Barragan

distance of  
center of steel  
from  $\pm$

L  $\pm$  R

Cont'd from  
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	L	$\pm$	R		
166	3.70		3.60		0.02
167	3.74		3.60		0.04
168	3.73		3.61	0.0	0.0
169	3.72		3.63		0.05
170	3.67		3.66		0.04
171	3.77		3.57	0.03	
172	3.65		3.63		0.03
173	3.69		3.59	0.04	
174	3.63		3.64		0.04
175	3.68		3.65		0.01
176	3.68		3.63		0.01
177	3.64		3.64		0.05
178	3.65		3.60	0.0	0.0
179	3.71		3.57	0.04	
180	3.68		3.59		0.05

12-16-46  
clear-cool

Nelson  
Leonard  
Barragan

3

L  $\pm$  R

	L	$\pm$	R		
181	3.71		3.62		0.01
182	3.70		3.61		0.02
183	3.66		3.64		0.01
184	3.70		3.59		0.01
185	3.71		3.63		0.04
186	3.66		3.68		0.04
187	3.69		3.62		0.01
188	3.71		3.59		0.02
189	3.66		3.64		0.01
190	3.66		3.65	0.0	0.0
191	3.61		3.72		0.05
192	3.66		3.67		0.01
193	3.67		3.65		0.06
194	3.72		3.60		0.04
195	3.67		3.61		0.03
196	3.62		3.70		0.05
197	3.66		3.64		0.05
198	3.68		3.67		0.02

199	3.68	3.65	0.02	
200	3.72	3.64	0.05	
201	3.72	3.60	0.09	
202	3.80	3.50	0.14	
203	3.77	3.63	0.08	
204	3.85	3.48	0.19	
205	3.76	3.54	0.10	
206	3.71	3.66	0.05	
207	3.68	3.60	0.05	
208	3.71	3.59	0.02	
209	3.65	3.63	0.01	
210	3.64	3.65	0.01	
		1-2-47		
211	3.62	3.61	0.01	
212	3.74	3.60	0.09	
213	3.68	3.68	0.04	
214	3.68	3.62	0.01	
215	3.66	3.65	0.03	

4

216	3.60	3.69	0.07	
217	3.63	3.68	0.10	0.0
218	3.65	3.66		0.01
219	3.74	3.58	0.05	
220	3.73	3.58	0.09	
221	3.81	3.58	0.14	
222	3.69	3.60	0.03	
223	3.67	3.64	0.07	
224	3.70	3.64	0.04	
225	3.82	3.55	0.12	
226	3.77	3.64	0.10	
227	3.70	3.68		0.03
228	3.70	3.62		0.06
229	3.72	3.63	0.03	
230	3.70	3.57	0.06	
231	3.68	3.65	0.05	
232	3.71	3.65	0.06	
233	3.67	3.64	0.05	

CONT P 8

## Elevs TOP RIBS

	5.15	554.00	B.M. 548.85
177		+ 2.32	56.32
178		+ 2.31	56.21
179		+ 2.27	56.27
180		+ 2.25	56.25
181		+ 2.27	56.27
182		+ 2.27	56.27
183		+ 2.25	56.25
184		+ 2.27	56.27
185		+ 2.23	56.23
186		+ 2.21	56.21
187		+ 2.23	56.22
188		+ 2.26	56.26
189		+ 2.30	56.30
190		+ 2.32	56.32
191		+ 2.35	56.35
192		+ 2.34	56.31
193		+ 2.34	56.24

12-16-46  
clear-cool

554.00

5

194		+ 2.38	56.33
195		+ 2.35	56.35
196		+ 2.36	56.36
197		+ 2.28	56.28
198		+ 2.32	56.32
199		+ 2.28	56.28
200		+ 2.33	56.33
201		+ 2.34	56.34
202		+ 2.33	56.33
203		+ 2.39	56.39
204		+ 2.26	56.26
205		+ 2.29	56.29
206		+ 2.31	56.31
207		+ 2.31	

Distance from  
to Springline

Distance of  
Tib Splice  
from &

	LT	RT	LT	RT
4	3.71	3.61	0.03	
5	3.69	3.58	0.03	
6	3.71	3.61	0.04	
7	3.75	3.53	0.05	
8	3.63	3.64	0.06	
9	3.55	3.63	0.06	
10	3.46 3.46	3.51 <sup>1-2-47</sup> 3.51	0.03	
11	3.62	3.38	0.0	
12	3.59	3.35	0.14	
13	3.60	3.34	0.03	
14	3.54	3.45		0.05
15	3.49	3.43		0.10
16	3.49	3.39		0.02
17	3.40	3.43		0.09
18	3.51	3.40	0.10	

12-20-46  
Clear-Cool

Nelson  
Leonard 6  
Barragan

19	3.51 3.51	3.38 <sup>1-2-47</sup> 3.38	0.07
20	3.51	3.46	0.03
21	3.56	3.44	0.07
22	3.48	3.46	0.04
23	3.48	3.43	0.06
24	3.42	3.40	0.05
25	3.50	3.39	0.03
26	3.46	3.41	0.09
27	3.52	3.39	0.18
28	3.50	3.42	0.15
29	3.55	3.45	0.14
30	3.48	3.45	0.05
31	3.52	3.48	0.13
32	3.53	3.44	0.10
33	3.55	3.42	0.09
34	3.57	3.42	0.07
35	3.59	3.44	0.03
36	3.49	3.57	0.00



37	3.44	3.52		0.07
38	3.42	3.46		0.04
39	3.43	3.50		0.06
40	3.49	3.55		0.08
41	<sup>3.46</sup> 3.47	3.56 ← 1-2-47 3.55		0.0 0.00
42	3.45	3.60		0.08
43	3.44	3.57		0.03
44	3.49	3.55		0.02
45	3.42	3.57		0.01
46	3.49	3.59		0.05
47	3.53	3.51	0.02	
48	3.61	3.44	0.07	
49	3.63	3.45	0.01	
50	3.49	3.59	r	0.11
51	3.47	3.51	0.01	0.02
52	3.50	3.54		0.02
53	3.45	3.65		0.07
54	3.48	3.51		0.04

55	3.53	3.63		0.04
56	3.58	3.54		0.03
57	3.62	3.50		0.03
58	3.66	3.46	0.09	.00
59	3.57	3.47		0.05
60	3.50	3.50		0.02
61	3.50	3.51		0.01
62	3.42	3.48		0.05
63	3.38	3.58		0.00
64	3.49	3.52	0.03	
65	3.49	3.56		0.10
66	3.37	3.49		0.01
67	3.41	3.43		0.05
68	3.43	3.43		0.05
69	3.46	3.40		0.05
70	3.45	3.52		0.03
71	3.52	3.51	0.05	
72	3.58	3.56	0.03	

73	3.55	3.47	0.02
74	3.43	3.43	0.05
75	3.36	3.44	0.02
76	3.42	3.51	0.06
77	3.56	3.56	0.01
78	3.51	3.47	0.01
79	3.55	3.40	0.06
80	3.76	3.57	0.14

1-2-47

8

234	3.63	3.72	0.06
235	3.59	3.74	0.02
236	3.66	3.64	0.03
237	3.70	3.60	0.03
238	3.68	3.65	0.05
239	3.63	3.62	0.07
240	3.72	3.61	0.08
241	3.80	3.58	0.12
242	3.87	3.45	0.17
243	3.65	3.64	0.0
244	3.66	3.69	0.01
245	3.67	3.64	0.02
246	3.67	3.63	0.03
247	3.77	3.59	0.07
248	3.71	3.61	0.05
249	3.75	3.63	0.02
250	3.73	3.61	0.0
251	3.71	3.63	0.01

CONT P. 11

12-20-46  
clear-warm

Nelson  
Leonard  
Barr 8987

Elev's TOP of ribs

	5.21	53.97		B.M. 448.76
#4			+1.75	55.72
#5			+1.92	55.89
6			+1.94	55.91
7			+1.87	55.84
8			+1.70	55.67
9			+1.73	55.70
10			+1.70	55.67
11			+1.82	55.79
12			+1.83	55.80
13			+1.70	55.67
14			+1.57	55.54
15			+1.57	55.54
16			+1.50	55.47
17			+1.54	55.51
18			+1.51	55.48
19			+1.53	55.50
20			+1.48	55.45

55.71

9

21	+1.42	55.39
22	+1.44	55.41
23	+1.40	55.37
24	+1.33	55.30
25	+1.28	55.25
26	+1.43	55.40
27	+1.45	55.42
28	+1.44	55.41
29	+1.49	55.46
30	+1.49	55.46
31	+1.58	55.55
32	+1.56	55.53
33	+1.61	55.57
34	+1.59	55.56
35	+1.60	55.57
36	+1.66	55.63
37	+1.73	55.70
38	1.83	55.80

53.97

39	+1.89	55.86
40	+1.91	55.88
41	+1.87	55.84
42	+1.86	55.83
43	+1.91	55.88
44	+1.84	55.81
45	+1.90	
46	+1.83	
47	+1.76	
48	+1.81	55.78
49	+1.87	55.84
50	+1.85	55.82
51	+1.90	55.87
52	+1.85	55.82
53	+1.84	55.81
54	+1.78	55.75
55	+1.71	55.68
56	+1.72	55.69

10

53.97

57	+1.77	55.74
58	+1.75	55.72
59	+1.88	55.85
60	+1.82	55.79
61	+1.87	55.84
62	+1.85	55.82
63	+1.76	55.73
64	+1.67	55.64
65	+1.61	55.58
66	+1.65	55.62
67	+1.63	55.60
68	+1.67	55.64
69	+1.70	55.67
70	+1.70	55.67
71	+1.71	55.68
72	+1.75	55.72
73	+1.81	55.78
74	+1.91	55.88

53.97

75	+1.95	55.92
76	+2.04	56.01
77	+1.97	55.94
78	+2.07	56.04
79	+2.17	56.14
80	+2.08	56.05

4.95 53.22 5.70 48.27

4.38 84

11

252	3.74	3.62	0.02
253	3.77	3.53	0.10
254	3.76	3.55	0.17
255	3.73	3.58	0.11
256	3.77	3.58	0.12
257	3.67	3.69	0.0 0.0
258	3.65	3.69	0.06
259	3.64	3.70	0.0 0.0
260	3.70	3.65	0.0 0.0
261	3.69	3.67	0.03
262	3.71	3.63	0.06 0.06
263	3.68	3.66	0.03 0.03
264	3.74	3.65	0.04
265	3.72	3.70	0.05
266	3.71	3.68	0.01
267	3.78	3.62	0.11
268	3.82	3.59	0.14
269	3.74	3.63	0.06

CONT P 19

1-3-47  
clear-water

FLEV TOP RIBS

Nelson  
Leonard  
Batt 898M

B.M.  
548.74

5.54 54.28

#207	+2.02	56.30
208	+2.08	56.36
209	+2.12	56.40
210	+2.12	56.40
211	+2.11	56.39
212	+2.08	56.36
213	+2.04	56.32
214	+2.06	56.34
215	+2.03	56.31
216	+1.89	56.17
217	+1.85	56.13
218	+1.81	56.09
219	+1.89	56.17
220	+1.87	56.15
221	+1.80	56.08
222	+1.77	56.05
223	+2.00	56.28

12

224	+2.01	56.29
225	+1.96	56.24
226	+1.87	56.15
227	+1.84	56.12
228	+1.90	56.18
229	+1.73	56.01
230	+1.82	56.10
231	+1.88	56.16
232	+1.94	56.22
233	+1.95	56.23
234	+1.99	56.27
235	+1.96	56.24
236	+2.03	56.31
237	+2.01	56.29
238	+2.00	56.28
239	+2.07	56.35
240	+2.04	56.32
241	+1.97	56.25

H.I.  
54.28

242	+1.99	56.27
243	+2.00	56.28
244	+1.98	56.26
245	+1.96	56.24
246	+2.02	56.20
247	+2.04	56.32
248	+2.11	56.39
249	+2.01	56.29
250	+2.07	56.35
251	+2.04	56.22
252	+2.05	56.33
253	+2.05	56.33
254	+2.16	56.44
255	+2.18	56.46
256	+2.18	56.46
257	+2.01	56.29
258	+2.05	56.33
259	+2.02	56.30

13

260	+2.09	56.37
261	+2.04	56.32
262	+2.05	56.33
263	+2.09	56.37
264	+1.99	56.27
265	+2.05	56.33
266	+2.04	56.32
267	+2.00	56.28
268	+1.97	56.25
269	+2.02	56.30
270	5.29	54.16
270		1-16-47 B.M 598.87
270	+2.11	56.27
271	+2.19	56.35
272	+2.14	56.20
273	+2.16	56.32
274	+2.20	56.36
275	+2.25	56.31
276	+2.22	56.28

cont p 18

CONT FROM P-11

1-16-46

270	3.84	3.58	0.11	
271	3.73	3.63	0.03	
272	3.74	3.69	0.01	
273	3.72	3.69	0.03	
274	3.62	3.74	0.07	
275	3.65	3.66	0.06	
276	3.74	3.61	0.05	
277	3.72	3.72	0.0	0.0
278	3.72	3.72	0.01	
279	3.66	3.74	0.03	
280	3.53	3.84	0.10	
281	3.48	3.88	0.18	
282	3.51	3.82	0.20	
283	3.59	3.74	0.14	
284	3.69	3.64	0.01	
285	3.66	3.73	0.02	
286	3.57	3.83	0.11	
287	3.57	3.80	0.09	

14

288	3.52	3.81	0.18	
289	3.67	3.67	0.05	
290	3.78	3.60	0.05	
291	3.70	3.63	0.01	
292	3.75	3.69	0.04	
293	3.70	3.72	0.03	
294	3.78	3.59	0.10	
295	3.76	3.62	0.08	
296	3.71	3.65	0.03	
297	3.73	3.71	0.01	
298	3.70	3.63	0.02	
299	3.61	3.67	0.02	
300	3.66	3.64	0.03	
301	3.68	3.64	0.0	0.0
302	3.70	3.64	0.02	
303	3.61	3.75	0.03	
304	3.58	3.76	0.02	
305	3.71	3.64	0.09	

CONT P-17



Elevs TOP RIBS THRU  
Muddy section. Taken with  
Transit over conveyor

			B.M.
	4.78	53.83	49.05
	-0.42	55.64	+2.23 56.06
322		+0.46	56.10
223		+0.44	56.08
224		+0.38	56.02
225		+0.39	56.03
226		+0.58	56.22
227		+0.75	56.39
228		+0.70	56.34
229		+0.81	56.45
330		+0.86	56.50
231		+1.02	56.66
232		+0.82	56.46
233		+0.71	56.35
234		+0.69	56.33
235		+0.79	56.43
236		+0.84	56.48
<del>237</del>		<del>+0.85</del>	
<del>Tip</del>	<del>-0.63</del>	<del>55.86</del>	<del>+0.85 56.49</del>

1-15-47  
clear-cool

Nelson  
Leonard  
Barra 2984

15

	55.86	
37		
<del>38</del>		+0.65
38		
39		+0.65 56.31
<del>39</del>		
340		+0.55
<del>40</del>		
41		+0.50
42		+0.51
43		+0.51 56.37
44		+0.60
<del>44</del>		
45		+0.61
46		+0.67
47		+0.68
<del>47</del>		
48		+0.76
49		+0.87 56.73
50		+0.82
		+0.56
		+0.64
		+0.65
		+0.55

VOID SEE PAGE 16

		T.P	
	-0.44	55.62	56.06
337		+0.87	56.49
338		+0.77	56.39
39		+0.73	56.35
40		+0.74	56.36
41		+0.74	56.36
42		+0.84	56.46
43		+0.84	56.46
44		+0.90	56.52
45		+0.91	56.53
46		+1.00	56.62
47		+1.10	56.72
48		+1.04	56.66
49		+0.79	56.41
350		+0.93	56.55
51		+0.87	56.49
52		+0.79	56.41
53		+0.79	56.41

354		+0.88	
55		+0.82	
56		+0.89	
57		+0.80	56.42
58		+0.78	
59		+0.92	
360		+0.98	56.60

1-16-47

CONT from P 14

306	3.79	3.60	0.14	
307	3.76	3.58	0.07	
308	3.70	3.67	0.00	0.00
309	3.77	3.62	0.05	
310	3.77	3.61	0.03	
311	3.71	3.61	0.08	
312	3.70	3.71	0.00	0.00
313	3.72	3.65	0.02	
314	3.78	3.65	0.05	
315	3.67	3.65	0.04	
316	3.67	3.66		0.07
317	3.65	3.64		0.04
318	3.74	3.55	0.01	
319	3.81	3.58	0.07	
320	3.82	3.64	0.03	
321	3.85	3.65	0.07	
322	3.76	3.63		0.03
323	3.80	3.61		0.05

1-16-47

17

324	3.77	3.67		0.07
325	3.74	3.67		0.01
326	3.82	3.64		
327	3.69	3.66		
328	3.69	3.72		
329	3.60	3.64		
330	3.54	3.62		
331	3.57	3.54		
332	3.70	3.58		
333	3.76	3.57		
334	3.73	3.56		
335	3.75	3.48		
336	3.70	3.54		
337	3.64	3.65		
338	3.60	3.78		
339	3.55	3.74		
340	3.55	3.71		
341	3.68	3.69		

CONT P 20

cont from p-13

1-16-47

54.16

277	+2.19	56.35
278	+2.19	56.35
279	+2.29	56.45
280	+2.24	56.40
281	+2.25	56.41
282	+2.26	56.42
283	+2.27	56.43
284	+2.25	56.41
285	+2.25	56.41
286	+2.23	56.39
287	+2.35	56.51
288	+2.40	56.56
289	+2.27	56.43
290	+2.25	56.41
291	+2.31	56.47
292	+2.25	56.41
293	+2.23	56.39
294	+2.28	56.48

54.16

18

295	+2.24	56.40
296	+2.24	56.40
297	+2.18	56.34
298	+2.30	56.46
299	+2.26	56.42
300	+2.27	56.43
301	+2.12	56.28
302	+2.19	56.35
303	+2.20	56.36
304	+2.22	56.38
305	+2.23	56.39
306	+2.24	56.40
307	+2.31	56.41
308	+2.19	56.35
309	+2.08	56.29
310	+2.07	56.23
311	+2.22	56.38
312	+2.18	56.34

1-23-47

19

## CHECK Elevs Wet section

	34.16		
313	+2.24	56.10	
314	+2.21	56.37	
315	5.39	54.94	B.M. 49.05
315	+1.87	56.31	
316	+1.88	56.32	
317	+1.88	56.32	
318	+1.81	56.25	
319	+1.68	56.12	
320	+1.68	56.12	
321	+1.62	56.06	
322	+1.67	56.11	
323	+1.64	56.08	
324	+1.60	56.04	
325			

	5.17	54.04	B.M. 548.87
CK BM	4.88	49.16 = 49.16	
#320	+2.04	56.08	
#321	+1.99	56.03	
322	+2.05	56.09	
323	+2.02	56.06	
324	+1.96	56.00	
325	+1.97	56.01	
326	+2.16	56.20	
327	+2.34	56.38	
328	+2.27	56.31	
329	+2.39	56.43	
330	+2.43	56.47	
331	+2.57	56.61	
332	+2.39	56.43	
333	+2.28	56.32	
334	+2.22	56.26	
335	+2.34	56.38	

Cont p 20

cont from P-17  
1-16-47

342 3.77 3.69

343 3.75 3.57

344 3.71 3.55

#347

cont from P 19 1-23-47

20

H.I

Elev

B.M.  
49.16

4.92 54.08

336 +2.38 56.46

337 +2.40 56.48

338 +2.28 56.36

339 +2.25 56.33

340 +2.25 56.33

341 +2.26 56.34

342 +2.34 56.42

343 +2.36 56.44

344 +2.42 56.50

345 +2.43 56.51

346 +2.52 56.60

347 +2.63 56.71

348 +2.58 56.66

349 +2.33 56.41

350 +2.40 56.48

351 +2.39 56.47

352 +2.30 56.38

CHECK 1-23-47  
SPRING LINE wet section

#327 3.67 3.66

328 3.69 3.71

329 3.59 3.62

330 3.51 3.59

331 3.55 3.52

332 3.68 3.57

333 3.73 3.54

334 3.67 3.52

335 3.71 3.46

336 3.68 3.54

337 3.63 3.65

338 3.57 3.78

339 3.53 3.74

340 3.52 3.70

341 3.64 3.67

342 3.74 3.66

343 3.71 3.54

1-24-47

CHECK SPRING LINE

21

#327 3.67 3.66

328 3.69 3.71

329 3.59 3.62

330 3.51 3.59

331 3.54 3.51

332 3.68 3.56

333 3.72 3.53

334 3.68 3.52

335 3.71 3.47

336 3.67 3.52

337 3.64 3.65

338 3.58 3.78

339 3.52 3.74

340

1-24-47

## CHECK Elevs - Ribs

4.39 53.55

B.M.  
549.16

#326 +2.65 56.20

#330 +2.90 56.45

#335 +2.82 56.37

#340 +2.78 56.33

#345 +2.95 56.50

#350 +2.92 56.47

#355 +2.84 56.39

1-27-47

## CHECK SPRING LINE

22

RIB #

#326 3.82 3.64

27 3.67 3.65

28 3.69 3.70

29 3.58 3.60

330 3.51 3.55

331 3.54 3.48

32 3.68 3.54

33 3.71 3.51

34 3.66 3.50 .17

35 3.69 3.45

36 3.66 3.53

37 3.63 3.66

38 3.57 3.77

39 3.52 3.74

340 3.51 3.70

41 3.63 3.67

42 3.73 3.65

43 3.70 3.53



1-27-47

344	3.66	3.54
45	3.80	3.60
46	3.82	3.56
47	3.80	3.60
48	3.74	3.57
49	3.79	3.72
350	3.73	3.68
51	3.78	3.73
52	3.74	3.76
53	3.68	3.64
54	3.67	3.57
55	3.78	3.58
56	3.68	3.62
57	3.68	3.60
58	3.82	3.60
59	3.63	3.61
360	3.50	3.71
361	3.62	3.72

1-27-47

23

362	3.70	3.69
63	3.57	3.66
64	3.51	3.75
65	3.64	3.81
66	3.66	3.70
67	3.78	3.72
68	3.69	3.72
69	3.72	3.61
370	3.81	3.58
71	3.80	3.58
72	3.80	3.72
73	3.78	3.69
74	3.74	3.74
75	3.70	3.65
76	3.68	3.66
77	3.64	3.64
78	3.78	3.63
79	3.85	3.65

CONT P 26

1-27-47

## Rib Elev's - CROWH

4.56 53.72

B.M.  
49.16

326	+2.48	56.20
327	+2.65	56.37
328	+2.58	56.30
329	+2.70	56.42
330	+2.71	56.43
31	+2.85	56.57
32	+2.68	56.40
33	+2.57	56.29
34	+2.51	56.23
35	+2.64	56.36
36	+2.71	56.43
37	+2.73	56.45
38	+2.63	56.35
39	+2.60	56.32
340	+2.61	56.33
41	+2.61	56.33
42	+2.69	56.41

1-27-47

## Rib Elev's - CROWH

4.90 54.06

B.M.  
49.16

24

# 343	+2.36	56.42
344	+2.43	56.49
45	+2.43	56.49
46	+2.51	56.57
47	+2.64	56.70
48	+2.59	56.65
49	+2.34	56.40
350	+2.41	56.47
51	+2.38	56.44
52	+2.26	56.32
53	+2.26	56.32
54	+2.32	56.38
55	+2.30	56.36
56	+2.40	56.46
57	+2.30	56.36
58	+2.28	56.34
59	+2.40	56.46

1-27-47

59.06

360		+2.47	56.53
361		+2.44	56.50
362		+2.35	56.41
363		+2.37	56.43
T.P.	-0.90	55.60	+2.44 56.50
364		+0.78	With Transit
65		+0.65	
66		+0.79	
67		+0.78	
68		+0.78	
69		+0.75	
370		+0.74	
371		+0.79	
72		+0.78	
73		+0.74	
74		+0.72	
75		+0.81	
76		+0.89	
77		+0.93	
78		+0.85	56.45

1-29-47

Rib Eleus

25

5.02 53.88 48.86

T.P.	-0.60	55.81	+2.53 56.41
379		+0.57	56.38
380		+0.70	56.51
81		+0.80	56.61
82		+0.80	56.61
83		+0.60	56.41
84		+0.63	56.44
85		+0.67	56.48
86		+0.71	56.52
87		+0.74	56.55
88		+0.76	56.57
89		+0.71	56.52
390		+0.91	56.72
91		+0.84	56.65
92		+0.76	56.57
93		+0.75	56.56
94		+0.77	56.58

CONT P 27

1-29-47

Cont. from D 23

380 3.75 3.77

81 3.70 3.60

82 3.70 3.64

83 3.72 3.64

84 3.62 3.67

85 3.61 3.59

86 3.50 3.69

87 3.52 3.64

88 3.51 3.66

89 3.63 3.57

390 3.59 3.47

91 3.60 3.51

92 3.67 3.59

93 3.73 3.50

94 3.75 3.52

95 3.70 3.57

96 3.68 3.57

97 3.59 3.64

1-29-47

26

398 3.57 3.59

99 3.65 3.64

400 3.71 3.70

401 3.70 3.69

2-24-47 CHECK SPRING LINE

#326 3.81 3.64 0.09

327 3.67 3.70 0.0 0.0

328 3.70 3.73 0.04

329 3.59 3.64 0.05

330 3.53 3.58 0.14

31 3.56 3.55 0.06

32 3.70 3.55 0.01

33 3.75 3.50 0.07

34 3.67 3.44 0.05

35 3.70 3.45 0.01

36 3.65 3.54 0.02

37 3.64 3.63 0.04

38 3.58 3.70 0.05

CONT PAGE 28

1-29-47  
CONT FRONT P 25  
55.81

395	+0.77	56.58
96	+0.90	56.71
97	+0.88	56.69
98	+0.90	56.71
99	+0.74	56.55
400	+0.69	56.50
401	+0.80	56.61
402	+0.66	56.47
403	+0.70	56.51
404	+0.51	56.32
405	+0.47	56.28
CHECK RIB ELEV'S AFTER STEEL SPREADERS INSTALLED. 1-29-47		
#330	4.44	53.61
31	+2.69	56.30
32	+2.81	
33	+2.63	56.24
34	+2.54	56.15
35	+2.50	56.11
335	+2.66	

1-29-47

53.61

27

336	+2.77	56.38
#350	+2.80	56.41
#351	+2.69	56.30
#352	+2.52	56.13
#353	+2.50	56.11
354	+2.61	56.22
355	+2.64	56.25
356	+2.79	56.40

Cont from page 26  
2-24-47

339	3.53	3.71	0.05	
340	3.55	3.67	0.06	
341	3.65	3.65	0.01	
42	3.73	3.64	0.02	
43	3.70	3.52	0.02	
44	3.67	3.52	0.06	
45	3.80	3.57	0.13	
46	3.83	3.54	0.07	
47	3.80	3.56	0.02	
48	3.79	3.56	0.10	
49	3.79	3.71	0.05	
350	3.75	3.68	0.05	
51	3.79	3.69	0.07	
52	3.72	3.74	0.05	
53	3.62	3.62	0.0	0.0
54	3.60	3.52	0.10	
55	3.76	3.53	0.17	
56	3.70	3.58	0.05	

2-24-47

28

357	3.69	3.56	0.01	
58	3.78	3.55	0.13	
59	3.68	3.62	0.05	
360	3.60	3.64		0.02
61	3.63	3.70		0.02
62	3.71	3.67		0.05
63	3.60	3.63		0.07
64	3.52	3.74		0.10
65	3.62	3.82		0.07
66	3.61	3.64	0.03	
67	3.75	3.71	0.08	
68	3.65	3.71	0.05	
69	3.68	3.60	0.04	
370	3.75	3.57	0.05	
71	3.77	3.58	0.05	
72	3.75	3.70	0.06	
73	3.75	3.70	0.01	
74	3.71	3.74	0.03	

2-24-47

375	3.67	3.66	0.0	0.0
76	3.65	3.68	0.0	0.0
77	3.61	3.66	0.0	0.0
78	3.75	3.65	0.05	
79	3.83	3.68	0.10	
3 80	3.70	3.79	0.0	0.0
81	3.67	3.65		0.01
82	3.66	3.66	0.01	
83	3.69	3.67	0.01	
84	3.59	3.62		0.02
85	3.58	3.63		0.06
86	3.46	3.73		0.10
87	3.50	3.67		0.04
88	3.47	3.67		0.03
89	3.59	3.59	0.0	0.0
3 90	3.55	3.49	0.06	
91	3.55	3.51	0.05	
92	3.63	3.62	0.0	0.0

2-24-47

29

393	3.66	3.53		0.05
94	3.55	3.52		0.10
95	3.45	3.54		0.19
96	3.42	3.51		0.25
97	3.44	3.56		0.23
98	3.52	3.56		0.20
99	3.58	3.62		0.10
400	3.65	3.69		0.07
01	3.60	3.66		0.02
02	3.75	3.69		0.14
03	3.62	3.60		0.06
04	3.67	3.55		0.11
05	3.84	3.54		0.22
06	3.66	3.69		0.09
07	3.72	3.69	0.0	0.0
08	3.49	3.89		0.17
09	3.64	3.77		0.07
410	3.68	3.72	0.0	0.0

4	11	3.68	3.72		0.04
	12	3.62	3.71		0.02
	13	3.58	3.82		0.12
	14	3.65	3.75		0.02
	15	3.70	3.66		0.01
	16	3.67	3.74		0.04
	17	3.67	3.65		0.01
	18	3.78	3.58		0.08
	19	3.74	3.63		0.03
4	20	3.74	3.65		0.01
	21	3.65	3.71		0.03

Elevs Rib's Growth 30  
2-24-47

4.84 53.73

BM 462+00  
48.89

#326	+2.48	56.21
27	+2.64	56.37
28	+2.54	56.27
29	+2.64	56.37
330	+2.60	56.33
31	+2.70	56.43
32	+2.54	56.27
33	+2.44	56.17
34	+2.40	56.13
35	+2.56	56.29
36	+2.67	56.40
37	+2.70	56.43
38	+2.60	56.33
39	+2.57	56.30
340	+2.57	56.30
41	+2.59	56.32
42	+2.68	56.41



2-24-47

53.73

43	+2.70	56.43
44	+2.75	56.48
45	+2.72	56.45
46	+2.80	56.53
47	+2.95	56.68
48	+2.89	56.62
49	+2.64	56.37
350	+2.69	56.42
51	+2.59	56.32
52	+2.42	56.15
53	+2.40	56.13
54	+2.50	56.23
55	+2.53	56.26
56	+2.67	56.40
57	+2.57	56.30
58	+2.52	56.25
59	+2.67	56.40
360	+2.78	56.51

2-24-47

31

53.73

Elev

361	+2.75	56.48
62	+2.68	56.41
63	+2.72	56.45
64	+2.65	56.38
65	+2.50	56.23
66	+2.59	56.32
67	+2.58	56.31
68	+2.62	56.35
69	+2.58	56.31
370	+2.57	56.30
71	+2.61	56.34
72	+2.60	56.33
73	+2.57	56.30
74	+2.58	56.31
75	+2.66	56.39
76	+2.75	56.48
77	+2.80	56.53
T.P	-2.90	53.61
	+2.78	56.51

53.61

#378	+2.83	56.46
79	+2.79	56.40
380	+2.92	56.53
81	+2.99	56.60
82	+2.96	56.57
83	+2.78	56.39
84	+2.80	56.41
85	+2.85	56.46
86	+2.91	56.52
87	+2.95	56.56
89	+2.95	56.56
89	+2.90	56.51
390	+3.06	56.67
91	+3.02	56.63
92	+2.94	56.55
93	+2.90	56.51
94	+2.89	56.50
95	+2.88	56.49

53.61

32

396	+2.99	56.60
97	+2.95	56.56
98	+3.04	56.65
99	+3.93	56.54
400	+2.89	56.50
01	+3.00	56.61
02	+2.85	56.46
03	+2.88	56.49
04	+2.71	56.32
05	+2.88	56.49
06	+2.94	56.55
07	+2.97	56.58
08	+2.94	56.55
09	+2.87	56.48
410	+2.86	56.47
11	+2.90	56.51
12	+2.94	56.55
13	+2.97	56.58

53.61

414		+2.97	56.58	
15		+2.98	56.59	
16		+2.96	56.57	
17		+3.05	56.66	
18		+3.00	56.61	
19		+3.03	56.64	
420		+2.94	56.55	
21		+2.95	56.56	
		4.60	49.01	48.97
BM Mon				5/5/47
#6 See Page	4.25	553.69	549.44	
44				Bliss
421		+2.84	56.53	decomp-d
422		+2.84	56.53	Phillips
423		+2.77	56.46	Exp
424		+2.77	56.46	
425		+2.88	56.57	
426		+2.90	56.59	
427		+2.97	56.66	
428		+2.91	56.60	
429		+2.91	56.60	
430		+2.85	56.54	cont page 45

3-17-47 see PAGE 6 This  
BOOK  
33

Spring 117e &amp; Readings

#1	3.79	3.66	0.02
2	3.74	3.62	0.04
3	3.72	3.64	0.08
#4	3.72	3.60	0.04
#5	3.69	3.58	0.04
6	3.70	3.59	0.04
7	3.71	3.50	0.05
8	3.58	3.62	0.11
9	3.51	3.61	0.12
10	3.46	3.50	0.04
11	3.62	3.36	0.02
12	3.61	3.32	0.17
13	3.60	3.34	0.04
14	3.54	3.41	0.02
15	3.49	3.41	0.08
16	3.48	3.38	0.01
17	3.41	3.42	0.08

3-17-47

#18	3.54	3.41	0.11	
19	3.51	3.38	0.10	
20	3.51	3.44	0.0	0.0
21	3.57	3.41	0.07	
22	3.45	3.48	0.02	
23	3.46	3.47	0.02	
24	3.40	3.40		0.08
25	3.50	3.38	0.04	
26	3.46	3.38	0.08	
27	3.53	3.36	0.17	
28	3.50	3.40	0.14	
29	3.55	3.44	0.15	
30	3.47	3.45	0.06	

3-17-47

Elevs Rib Crowl7

see page 9 This Book

34

3.58 53.41

49.83

#1	+2.00	55.41
2	+2.05	55.46
3	+2.25	55.66
4	+2.33	55.74
5	+2.49	55.90
6	+2.53	55.94
7	+2.46	55.87
8	+2.22	55.63
9	+2.25	55.66
10	+2.22	55.63
11	+2.39	55.80
12	+2.39	55.80
13	+2.26	55.67
14	+2.09	55.50
15	+2.09	55.50
16	+2.04	55.45
17	+2.12	55.53

53.41

18	+2.10	55.51
19	+2.10	55.51
20	+2.05	55.46
21	+2.00	55.41
22	+2.00	55.41
23	+1.97	55.38
24	+1.88	55.29
25	+1.84	55.25
26	+1.98	55.39
27	+1.98	55.39
28	+1.97	55.38
29	+2.03	55.44
30	+2.02	55.43

Rib Elevs 3-25-47 35

CR. BM	-5.28	99.23 = 99.22
615	+2.28	56.79
616	+2.25	56.76
17	+2.27	56.78
18	+2.15	56.66
19	+2.19	56.70
620	+2.21	56.72
21	+2.22	56.73
22	+2.17	56.68
23	+2.16	56.67
24	+2.17	56.68
25	+2.19	56.70 56.59
26	+2.12	56.63
27	+2.04	56.55
28	+1.99	56.66
29	+2.18	56.69 56.68
630	+2.07	56.58
631	+1.97	56.48
32	+2.00	56.51

↑  
54.51

633		+2.13	56.64
34		+2.10	56.61
635		+2.15	56.66
636		+2.18	56.69
637		+2.25	56.76
T.P	-2.07	54.51	+3.32 56.58
38		+3.34	56.60
39		+3.52	56.78
640		+3.50	56.76
41		+3.52	56.78
42		+3.56	56.82
43		+3.67	56.93
44		+3.49	56.75
45		+3.58	56.84
46		+3.58	56.84
47		+3.45	56.71 56.63
48		+3.50	56.76
49		+3.58	56.84
50		+3.59	56.85

↑  
53.26

651		+3.58	56.84
652		+3.42	56.68
653		+3.32	56.58
654		+3.40	56.66 56.64
655		+3.47	56.73 56.70
		3.55	53.26
			5M 49.71

422	0.0	0.0
23	0.06	0.06
24	0.06	0.06
25	0.01	
26	0.13	
27	0.12	
28	0.02	
29		0.03
430	0.04	
31	0.05	0.05
32	0.02	
33	0.0	0.0
34	0.11	0.11
35	0.06	0.06
36	0.07	0.07
37	0.08	0.08
38	0.0	0.0
39		

	L+	R+	
440		0.03	
41		0.05	
42		0.10	
43		0.09	
44		0.09	
45		0.10	
46		0.0	0.0
47		0.04	
48		0.07	
49		0.10	
450		0.10	
51		0.07	
52		0.01	
53		0.0	0.0
54		0.04	
55		0.11	
56		0.13	
57		0.0	0.0

37

R+

	LT	RT
458	0.03	0.03
59	00	00
460	004	
61	004	
62	003	
63	0.03	
64	0.01	
65	0.05	
66	0.05	
67	0.08	
68	00	00
69	0.09	
470	0.18	
71	0.02	
72	0.01	
73	0.02	0.02
74	0.03	
75	0.	0.07

			LT	RT	38
476				0.06	
77				0.01	
78				00	00
79				0.02	
480				0.01	
81				0.03	
82				0.03	
83				0.03	
84				0.03	
85				0.11	
86				0.10	
87				0.03	
88				0.01	
89				00	00
490	3.80	3.59		0.07	
91	3.71	3.60		0.05	
92	3.77	3.55		0.09	
93	3.65	3.70			0.05



3-28-47

494	3.65	3.73		0.07	
95	3.63	3.71		0.08	
96	3.61	3.73		0.09	
97	3.62	3.70		0.02	
98	3.62	3.70		0.10	
99	3.57	3.80		0.11	
500	3.60	3.75		0.09	
01	3.70	3.65	0.0	0.0	
02	3.73	3.65		0.02	
03	3.70	3.65		0.01	
04	3.70	3.66		0.02	
05	3.71	3.64		0.0	0.0
06	3.77	3.62		0.0	0.0
07	3.72	3.63		0.01	
08	3.70	3.64	0.0	0.0	
09	3.76	3.59	0.0	0.06	
510	3.72	3.60	0.0	0.06	
11	3.57	3.75		0.07	

3-28-47

37

512	3.58	3.75		0.11
13	3.68	3.62		0.03
14	3.65	3.63		0.04
15	3.62	3.65		0.06
16	3.60	3.70		0.09
17	3.60	3.65		0.08
18	3.56	3.69		0.09
19	3.66	3.67		0.02
520	3.77	3.55		0.12
21	3.78	3.60		0.03
22	3.73	3.56		0.05
23	3.70	3.62		0.01
24	3.66	3.62		0.05
25	3.70	3.62		0.05
26	3.70	3.60		0.08
27	3.72	3.65		0.06
28	3.65	3.68		0.04
29	3.72	3.65		0.03

3-28-47

530	3.75	3.59		0.08	
31	3.71	3.61		0.05	
32	3.62	3.66		0.05	
33	3.57	3.74		0.07	
34	3.64	3.69		0.01	
35	3.75	3.61		0.01	
36	3.74	3.66		0.0	0.0
37	3.67	3.75		0.04	
38	3.66	3.76		0.06	
39	3.67	3.69	3-28-47	0.01	
540	3.74	3.66	3-27-47	0.04	
41	3.71	3.67		0.0	0.0
42	3.60	3.69		0.02	
43	3.69	3.69		0.04	
44	3.70	3.66		0.0	0.0
45	3.75	3.63		0.05	
46	3.80	3.59		0.09	
47	3.69	3.64		0.02	

Springline

3-27-47

40

548	3.71	3.64		0.05	
49	3.72	3.64		0.07	
550	3.71	3.60		0.08	
51	3.75	3.59		0.09	
52	3.70	3.63		0.02	
53	3.66	3.68		0.01	
54	3.67	3.63		0.02	
55	3.70	3.65		0.00	0.00
56	3.63	3.71		0.02	
57	3.64	3.68		0.08	
58	3.58	3.71		0.10	
59	3.53	3.80		0.11	
560	3.63	3.68		0.02	
61	3.69	3.65		0.04	
62	3.66	3.70		0.03	
63	3.73	3.65		0.03	
64	3.70	3.65		0.10	
65	3.73	3.66		0.01	

Springline

3-27-47

566	3.70	3.67	0.0	0.0
67	3.70	3.65	0.01	
68	3.68	3.68	0.02	
69	3.74	3.65	0.02	
570	3.80	3.58	0.12	
571	3.70	3.65	0.03	
72	3.68	3.72		0.10
73	3.76	3.63	0.03	
74	3.69	3.67	0.07	
75	3.70	3.68	0.02	
76	3.80	3.55	0.14	
77	3.77	3.58	0.07	
78	3.76	3.60	0.05	
79	3.72	3.67	0.05	
580	3.70	3.63	0.05	
81	3.61	3.67		0.03
82	3.66	3.64	0.02	
83	3.66	3.65	0.0	0.0

Springline

3-27-47

41

584	3.61	3.69		0.08
85	3.67	3.59	0.01	
86	3.68	3.64	0.00	
87	3.70	3.65	0.02	
88	3.74	3.59	0.03	
89	3.69	3.63	0.04	
590	3.72	3.62	0.06	
91	3.76	3.59	0.05	
92	3.79	3.53	0.07	
93	3.85	3.48	0.21	
94	3.79	3.56	0.14	
95	3.79	3.56	0.14	
96	3.75	3.59	0.15	
97	3.76	3.56	0.12	
98			0.05	
99			0.10	
600			0.14	
601			0.13	

	LT	RT
602	0.03	
603	0.05	
604	0.04	
605		0.03
606	0.04	
607	0.11	
608	0.08	
609		0.08
610	0.02	
11	0.06	
12	0.10	
13	0.05	
14	0.07	
15	0.07	
16	0.02	
17		0.16
18	00	00
19	00	00

	LT	RT
620	0.13	
21	0.07	
22	0.05	
23	0.07	
24	0.05	
25	0.09	
26	00	00
27	0.10	
28	0.12	
29	0.03	
630	0.10	
31	0.09	
32	0.14	
33	0.13	
34	0.05	
35	0.02	
36	0.08	
37	0.04	

	LT	RT
638	0.02	
39	0.10	
640		0.03
41	0.09	
42		0.06
43	0.08	
44	0.10	
45	0.05	
46	0.05	
47	0.06	
48		0.01
49	0.02	
650	0.03	
51	0.05	
52	0.13	
53	0.30	
54	0.36	
55	0.16	

	LT	RT
656	0.10	
657	0.04	
658	0.10	
659	0.05	
660	0.04	
61		0.03
62		0.11
63		0.02
64	0.03	
65	0.03	
66	0.07	
67	0.05	
68		0.00
69		0.01
670	0.04	
71	0.03	
72	0.05	
73	0.05	

Continued Page 61

Check Levels from Original BM				
BM	3.48	552.41		542.93
T.P	4.75	553.52	3.64	548.77
			3.69	549.83
	4.80	553.09	5.23	548.29
BM	4.53	553.47	4.15	548.94
BM	4.59	553.35	4.71	548.76
BM	4.67	553.58	4.44	548.91
BM	4.25	553.32	4.51	549.07
BM	4.48	553.92	3.88	549.44 ✓
T.P	4.14	553.58	4.48	549.41
BM	4.77	554.04	4.31	549.27
	4.09	553.67	4.46	549.58
Set BM	4.81	554.35	4.13	549.54
Check II	4.24	554.39	4.20	550.15
				Record 550.14
Set BM	5.05	554.79	4.65	549.74
Set BM	4.91	554.51	5.19	549.60

East Tunnel Portal

Spike in Power Pole #76981

Bliss 44  
Leonard T.  
Phillips  
Fay  
5/5/47

Fish Plate Driven in N Bank. Close to Track Switch

BM Iron pin & Track Between ribs 17+18.

455+56+ Between Ribs 133+134 & iron pin

& Mon # 3. 458+10+ Between Ribs 188+89 & 114

& Mon # 4 &

& Mon # 5 &

& Mon # 6 & 469+00 Between Ribs 422+423

& Mon # 7. 474+37 Between Ribs 531+532

& Mon # 8 " " 598+599

& Mon # 9 " " 684+685

487+00 Working BM Steel Pin

& Mon. Drill Rod in Con Mon # 10

& Mon # 11 " # 11

Cont. from  
page 33

↑  
55369

Elev

431	+2.91	556.60
32	+2.90	556.59
33	+2.93	556.62
34	+2.99	556.68
35	+2.94	56.63
36	+2.84	56.53
37	+2.78	56.47
38	+2.75	36.44
39	+2.74	56.43
440	+3.00	56.69
41	+2.96	56.65
42	+2.88	56.57
43	+2.91	56.60
44	+3.01	56.70
45	+2.96	56.65
46	+2.95	56.64
47	+2.96	56.65
48	+2.97	56.66

Rib Elevations

55369

45

449	+2.99	56.68
450	+2.88	56.57
51	+2.90	56.59
52	+2.91	56.60
53	+2.91	56.60
54	+2.95	56.64
55	+2.96	56.65
56	+2.92	56.61
57	+2.90	56.59
58	+2.86	56.55
59	+2.85	56.54
460	+2.85	56.54
61	+2.94	56.63
62	+2.92	56.61
63	+2.90	56.59
64	+2.90	56.59
65	+2.93	56.62
66	+2.91	56.60

T  
553.69

Rib Elevations

+

467		+2.89	56.58
68		+2.90	56.59
69		+2.93	56.62
470		+2.87	56.56
T.P.	-2.39	554.17	+2.8 <sup>7</sup> 556.56
71		+2.44	56.61
72		+2.42	56.59
73		+2.38	56.55
74		+2.42	56.59
75		+2.42	56.59
76		+2.43	56.60
77		+2.42	56.59
78		+2.46	56.63
79		+2.44	56.61
480		+2.44	56.61
81		+2.47	56.64
82		+2.40	56.57
T.P.	-2.49	554.07	+2.39 556.56

554.07

46

483		+2.55	556.62
84		+2.63	556.70
85		+2.65	556.72
86		+2.61	556.68
87		+2.60	556.67
88		+2.59	56.66
89		+2.65	56.72
490		+2.63	56.70
91		+2.57	56.64
92		+2.51	56.58
93		+2.56	56.63
94		+2.55	56.62
95		+2.59	56.66
96		+2.62	56.69
97		+2.62	56.69
98		+2.63	56.70
99		+2.54	56.61
500		+2.53	56.60



554.07

501	+2.52	56.59
02	+2.57	56.64
03	+2.56	56.63
04	+2.47	56.54
05	+2.44	56.51
06	+2.56	56.63
07	+2.54	56.61
08	+2.62	56.69
09	+2.65	56.72
510	+2.66	56.73
11	+2.62	56.69
12	+2.55	56.62
13	+2.54	56.61
14	+2.52	56.59
15	+2.49	56.56
16	+2.51	56.58
17	+2.64	56.71
18	+2.60	56.67

554.07

47

519	+2.53	56.66
520	+2.55	56.62
21	+2.54	56.61
22	+2.56	56.63
23	+2.65	56.72
24	+2.61	56.68
25	+2.63	56.70
26	+2.66	56.73
27	+2.62	56.69
28	+2.63	56.70
29	+2.61	56.68
530	+2.65	56.72
31	+2.67	56.74
32	+2.71	56.78
33	+2.69	56.76
34	+2.60	56.67
35	+2.64	56.71
36	+2.62	56.69

π  
55407

537		+2.58	56.65
check			
BN1	+4.83	55410 - 4.81	549.24
538		+2.62	56.72
39		+2.66	56.76
40		+2.62	56.72
41		+2.67	56.77
42		+2.70	56.80
43		+2.59	56.69
44		+2.60	56.70
45		+2.62	56.72
46		+2.68	56.78
47		+2.71	56.81
48		+2.70	56.80
49		+2.70	56.80
550		+2.68	56.78
51		+2.62	56.72
52		+2.62	56.72
53		+2.68	56.78

Mon #7  
474137  
see page 44  
27  
Record  
5/6/47

π  
55410

48

554		+2.63	56.73
55		+2.61	56.71
56		+2.61	56.71
57		+2.64	56.74
58		+2.64	56.74
59		+2.68	56.78
560		+2.66	56.78
61		+2.56	56.66
62		+2.50	56.60
63		+2.54	56.64
64		+2.60	56.70
65		+2.59	56.69
66		+2.57	56.67
67		+2.56	56.66
68		+2.55	56.65
69		+2.54	56.66
570		+2.60	56.70
71		+2.60	56.70
T.P.	5.03	55430 - 4.83	549.27

π  
55420

TP - 2.25 554.43 + 2.<sup>38</sup>~~28~~ 556.68

572 + 2.15 556.58

73 + 2.14 556.57

74 + 2.16 559

75 + 2.20 556.63

76 + 2.24 556.67

77 + 2.26 556.69

78 + 2.19 556.62

79 + 2.21 556.64

580 + 2.18 556.61

81 + 2.14 556.57

82 + 2.15 556.58

83 + 2.07 556.50

84 + 2.10 556.53

85 + 2.25 556.68

86 + 2.30 556.73

87 + 2.29 556.72

88 + 2.27 556.70

π  
55443 +

49

89 + 2.22 556.65

590 + 2.23 556.66

91 + 2.26 556.69

92 + 2.29 556.72

93 + 2.32 556.75

94 + 2.31 556.74

95 + 2.31 556.74

96 + 2.42 556.85

97 + 2.42 556.85

98 + 2.39 556.82

99 + 2.41 556.84

600 + 2.47 556.90

01 + 2.39 556.82

02 + 2.38 556.81

03 + 2.36 556.79

04 + 2.39 556.82

05 + 2.32 556.75

06 + 2.40 556.83

60.7		+2.32	56.75
08		+2.34	56.77
09		+2.30	56.73
610		+2.39	56.82
T.P.	-2.56	554.26	+2.39 556.82
check BM		-4.67	543.59
611		+2.65	56.91
612		+2.86	56.92
613		+2.74	57.00
614		+2.64	56.90
check on 2		+2.53	556.79
615			
T.P.	+3.39	553.69	-3.96 550.30
check on 2		+3.05	556.74
655			
56		+3.08	56.77
57		+3.13	56.82
58		+3.11	56.80
59		+3.11	56.80
660		+3.04	56.73

4/10/48  
opp. P. 10  
589 See page  
44

see page  
35 R.H.  
Top page

see page  
36 R.H.  
Page

661		+3.06	56.75
62		+3.02	56.71
63		+3.05	56.74
64		+3.10	56.79
65		+2.98	56.67
66		+2.98	56.67
67		+3.00	56.69
68		+3.04	56.73
69		+3.02	56.71
670		+3.08	56.77
71		+3.09	56.78
72		+3.08	56.77
73		+3.07	56.76
74		+3.10	56.79
75		+3.08	56.77
76		+3.13	56.88
77		+3.11	56.80
78		+3.06	56.75

679		+3.09	56.78
680		+3.14	56.83
81		+3.14	56.83
82		+3.14	56.83
83		+3.12	56.81
84		+3.11	56.80
T.P. 817 <sup>09</sup>	+4.89	554.43 - 4.15	549.54
685		+2.38	56.81
86		+2.48	56.91
87		+2.32	56.75
88		+2.35	56.78
89		+2.43	56.86
690		+2.35	56.78
91		+2.31	56.74
92		+2.34	56.77
93		+2.48	56.91
94		+2.48	56.91
95		+2.38	56.79

Expand  
9  
between  
Pibs  
684+685  
see page  
44.

696		+2.32	56.75
97		+2.29	56.72
98		+2.46	56.89
99		+2.47	56.90
700		+2.50	56.93
T.P.		<del>+2.49</del>	
01		+2.60	57.03
02		+2.82	57.25
03		+2.87	57.30
04		+2.82	57.25
05		+2.65	57.08
06		+2.52	56.95
07		+2.44	56.87
08		+2.39	56.82
09		+2.43	56.86
710		+2.44	56.87
11		+2.45	56.88
T.P.	2.14	554.73	+2.44 556.87

on  
712

55473

712	+2.15	56.88
13	+2.11	56.84
14	+2.11	56.84
15	+2.13	56.86
16	+2.21	56.94
17	+2.22	56.95
18	+2.17	56.90
19	+2.13	56.86
720	+2.14	56.87
21	+2.19	56.92
22	+2.25	56.98
23	+2.13	56.86
24	+2.18	56.91
25	+2.20	56.93
26	+2.22	56.95
27	+2.26	56.99
28	+2.23	56.96
29	+2.33	57.06

55473

52

730	+2.29	57.02
31	+2.32	57.05
32	+2.14	56.87
33	+2.14	56.87
34	+2.17	56.90
35	+2.15	56.88
36	+2.14	56.87
37	+2.10	56.82
38	+2.08	56.81
39	+2.11	56.84
740	+2.14	56.87
41	+2.15	56.88
42	+2.17	56.90
43	+2.18	56.91
44	+2.19	56.92
45	+2.20	56.93
46	+2.15	56.88
47	+2.17	56.90

55473

748			+2.22	56.95
49			+2.19	56.92
750			+2.22	56.95
51			+2.21	56.94
52			+2.18	56.91
53			+2.23	56.96
54			+2.24	56.97
TP. -	2.18	554.78	+2.23	56.96
55			+2.18	56.96
56			+2.25	57.03
57			+2.22	57.00
58			+2.20	56.98
59			+2.17	56.95
760			+2.17	56.95
61			+2.33	57.11
62			+2.36	57.14
63			+2.32	57.10
64			+2.26	57.04

 $\pi$   
55478

53

765			+2.18	56.94
66			+2.14	56.92
67			+2.16	56.94
68			+2.38	57.16
69			+2.28	57.06
770			+2.32	57.10
71			+2.32	57.10
72			+2.34	57.12
73			+2.14	56.92
74			+2.16	56.94
75			+2.19	56.97
76			+2.29	57.07
77			+2.32	57.10
78			+2.31	57.09
79			+2.34	57.12
780			+2.20	56.98
81			+2.21	56.99
82			+2.31	57.05

↑  
35478

783	+2.15	56.93
84	+2.32	57.10
85	+2.33	57.11
86	+2.30	57.08
87	+2.28	57.06
88	+2.24	57.02
89	+2.16	56.94
790	+2.17	56.95
91	+2.20	56.98
92	+2.18	56.96
93	+2.17	56.95
94	+2.22	57.00
95	+2.38	57.16
96	+2.22	57.00
97	+2.28	57.06
98	+2.23	57.01
99	+2.22	57.00
800	+2.22	57.00

↑

↑  
55478

54

801	+2.32	57.10	556.96 <sup>KVA</sup>
02	+2.33	57.11	"
03	+2.23	57.01	556.88
04	+2.20	57.07	"
Check <sup>BM</sup> + 4.96	55470	5.05	549.73
805	+2.49	57.19	556.96 <sup>Record</sup>
06	+2.40	57.10	556.88 <sup>See page 44</sup>
07	+2.38	57.08	556.89
08	+2.47	57.17	556.97
09	+2.42	57.12	"
810	+2.47	57.17	"
11	+2.41	57.11	"
12	+2.45	57.15	"
13	+2.49	57.19	556.98
14	+2.46	57.16	"
15	+2.46	57.16	"
16	+2.49	57.19	"
17	+2.47	57.17	"



55470

818	+2.47	57.17	556.98
819	+2.35	57.05	"
820	+2.46	57.16	556.99
21	+2.46	57.16	"
22	+2.45	57.15	"
23	+2.45	57.15	"
24	+2.40	57.10	"
25	+2.45	57.15	"
26	+2.47	57.17	557.00
27	+2.42	57.12	"
28	+2.43	57.13	"
29	+2.46	57.16	"
830	+2.43	57.13	"
31	+2.44	57.14	"
32	+2.45	57.15	557.01
33	+2.44	57.14	"
34	+2.42	57.12	"
35	+2.46	57.16	"

 $\pi$   
55470

55

836	+2.43	57.13	557.01
837	+2.43	57.13	"
838	+2.46	57.16	557.02
39	+2.43	57.13	"
840	+2.51	57.21	"
41	+2.46	57.16	"
42	+2.44	57.14	"
43	+2.35	57.05	"
44	+2.33	57.03	"
45	+2.34	57.04	557.03
46	+2.42	57.12	"
47	+2.38	57.08	"
48	+2.38	57.08	"
49	+2.41	57.11	"
850	+2.40	57.10	"
01	+2.31	57.01	557.04
2	+2.35	57.05	"
3	+2.52	57.22	"

T  
55470

854		+2.52	57.22	557.04
5		+2.50	57.20	"
6		+2.40	57.10	556.97
7		+2.55	57.25	557.05
8		+2.55	57.25	"
check 3M	5.05	554.79	4.96	549.74
9		+2.36	57.15	"
860		+2.42	57.21	"
61		+2.40	57.19	"
2		+2.42	57.21	557.06
3		+2.38	57.17	"
4		+2.42	57.21	"
5		+2.35	57.14	"
6		+2.39	57.18	"
7		+2.41	57.20	557.07
8		+2.37	57.16	"
9		+2.39	57.18	"
870		+2.38	57.17	"

170510  
488+00  
Ribs 802-803  
see page  
42

Reserve Pages 54 to 60  
for ribs Elev  
55479

56

871		+2.41	57.20	557.07
872		+2.44	57.23	557.08
873		+2.44	57.23	"
74		+2.30	57.09	557.00
75		+2.44	57.23	557.08
76		+2.45	57.24	"
77		+2.51	57.30	557.09
78		+2.43	57.22	"
79		+2.37	57.16	"
880		+2.39	57.18	"
1		+2.39	57.18	"
2	4.91	554.51	-5.19	549.60
3		+2.77	57.28	492+19
4		+2.70	57.21	557.10
5		+2.72	57.23	"
6		+2.62	57.13	"
7		+2.72	57.23	"
8		+2.73	57.24	557.11

Mon 11/557.10  
Drill Pin  
Between  
Ribs 880  
81

	554.51			
889		+2.69	57.20	557.11
890		+2.63	57.14	557.03
1		+2.74	57.25	557.11
2		+2.69	57.20	"
3		+2.68	57.19	557.12
4		+2.77	57.28	"
5		+2.75	57.26	"
TP	<sup>506</sup> <del>4.77</del>	554.66	4.91	549.60 Mon #11
6		+2.60	57.26	"
7		+2.50	57.16	"
8		+2.67	57.33	557.13
9		+2.70	57.36	"
900		+2.61	57.27	"
1		+2.61	57.27	"
2		+2.60	57.26	"
3		+2.61	57.27	557.14
4		+2.64	57.30	"
5		+2.63	57.29	"
6		+2.63	57.29	"

	<sup>X</sup> 554.66	+	RIB. ELEV.	57
907			+2.64	57.30 557.14
8			+2.60	57.26 557.15
9			+2.64	57.30 "
910			+2.68	57.34 "
check BM			-5.06	549.60 "
			6-6-47	
			LEONARD, NIENOV, FAHY.	
B.M. AT STA. 496+00			549.93	CORRECTED 6-6-47.
	+4.86	554.79		
911			+2.53	557.32 557.15
12			+2.54	557.33 557.30
13			+2.50	557.29 557.16
14			+2.49	557.28 "
15			+2.54	557.33 "
16			+2.57	557.36 "
17			+2.54	557.33 "
18			+2.47	557.26 "
19			+2.41	557.20 557.17
910			+2.48	557.27 "

Rib No.	$\bar{\Delta}$	+	Rib Elev.	
	554.79			
921		2.44	557.23	557.17
922		2.59	557.38	"
923		2.58	557.37	"
924		2.52	557.31	557.18
925		2.54	557.33	"
926		2.47	557.26	"
927		2.59	557.38	"
928		2.56	557.35	"
929		2.55	557.34	557.19
930		2.60	557.39	"
931		2.42	557.21	"
932		2.47	557.26	"
933		2.52	557.31	"
934		2.59	557.38	557.34
935		2.57	557.36	557.20
936		2.54	557.33	"
937		2.58	557.37	"
938		2.60	557.39	"

Rib Number	$\bar{\Delta}$	+	Rib Elev.	58
	554.79			
939		2.54	557.33	557.21
940		2.61	557.40	557.35
941		2.55	557.34	557.21
942		2.55	557.34	"
943		2.55	557.34	"
944		2.61	557.40	557.22
945		2.63	557.42	"
946		2.70	557.49	"
947		2.61	557.40	"
948		2.56	557.35	"
949		2.58	557.37	"
950		2.60	557.39	557.23
	B.M. Sta 496+00	-4.86	549.93	"
	+5.07	555.00		
951		2.42	557.42	"
952		2.44	557.44	"
953		2.42	557.42	"
954		2.45	557.45	"

Rib  
Number⌈  
555.00

+

Rib  
Elev.

955	2.42	557.42	557.24
956	2.57	557.57	"
957	2.55	557.55	"
958	2.41	557.41	"
959	2.45	557.45	"
960	2.47	557.47	557.25
961	2.53	557.53	"
962	2.51	557.51	"
963	2.53	557.53	"
964	2.51	557.51	"
965	2.55	557.55	557.26
966	2.52	557.52	"
967	2.56	557.56	"
968	2.58	557.58	"
969	2.51	557.51	"
970	2.51	557.57	557.27
971	2.61	557.61	"
972	2.63	557.63	"

Rib No.

⌈

555.00

+

Rib  
Elev.

59

973	2.57	557.57	557.27
974	2.56	557.56	"
975	2.59	557.59	"
B.M. Sta. 496+00	-5.07	549.93	"
B.M. Mon <sup>th</sup> R.	⌈ 555.81	+5.55	550.26
976	1.79	557.60	557.28
977	1.80	557.61	"
978	1.92	557.73	"
979	1.90	557.71	"
980	1.88	557.69	"
981	1.67	557.48	557.29
982	1.62	557.43	"
983	1.63	557.44	"
984	1.62	557.43	"
985	1.69	557.50	"
986	1.62	557.43	557.30
987	1.68	557.49	"
988	1.68	557.49	"

Rib Number	$\pi$ 555.81	+	Rib Elevation	
989		1.68	57.49	557.30
990		1.78	57.59	"
991		1.77	57.58	557.31
992		1.70	57.51	"
993		1.67	57.48	"
994		1.70	57.51	"
995		1.68	57.49	"
996		1.67	57.48	557.32
997		1.72	57.53	"
998		1.69	57.49	"
999		1.74	57.55	"
1000		1.76	57.57	"
1001		1.80	57.61	557.33
1002		1.76	57.57	"
1003		1.79	57.60	"
1004		1.73	57.54	"
1005		1.79	57.60	"
1006		1.75	57.56	"

Rib No.	$\pi$ 555.81	+	Rib Elev.	60
1007		1.77	57.58	557.34
1008		1.79	57.60	"
1009		1.85	57.66	"
1010		1.71	57.52	"
1011		1.74	57.55	557.35
1012		1.77	57.58	"
1013		1.73	57.54	"
1014		1.85	57.66	"
1015		1.85	57.66	"
1016		1.72	57.53	557.36
1017		1.70	57.51	"
1018		1.71	57.52	"
1019		1.73	57.54	"
1020		1.70	57.51	"
1021		1.70	57.51	"
1022		1.69	57.50	557.37
1023		1.72	57.53	"
1024		1.68	57.49	"

CONT'D ON PP 92.

	LT	RT
674		0.03
75	00	00
76	0.09	
77	0.10	
78	0.08	
79	0.09	
680	0.16	
81		0.02
82		0.04
83	0.02	
84	00	00
85		0.14
86		0.19
87		0.05
88	0.03	
89		0.02
690		0.14
91		0.11

	LT	RT
692		0.02
93	0.02	
94		0.01
95		0.10
96		0.11
97		0.11
98		0.04
99	00	00
700	0.05	
01		0.02
02	0.05	
03		0.01
04		0.03
05	00	00
06		0.10
07		0.06
08		0.04
09	0.07	

	LT	RT
710		0.05
11		0.06
12	0.07	
13	0.10	
14	0.09	
15		0.03
16	00	00
17	0.03	
18	0.02	
19	0.10	
720	0.19	
21	0.20	
22	0.26	
23	0.07	
24	0.05	
25	0.05	
26	0.11	
27	0.17	

	LT	RT
728	0.22	
29	0.14	
730	0.13	
31	0.12	
32	0.09	
33	0.01	
34	0.14	
35	0.14	
36	0.10	
37	0.06	
38	0.02	
39	0.10	
740	0.03	
41	0.09	
42	0.06	
43	0.05	
44	00.00	
45	0.05	



	Lt	Rt
746	0.10	
47	0.01	
48	0.05	
49	0.10	
756	0.06	
51		0.01
52	00 00	
53		0.2
54		0.07
55		0.12
56		0.05
57	0.07	
58	0.06	
59	0.03	
760	0.02	
61	0.01	
62	0.03	
63		0.12

764	0.08
65	0.17
66	00 00
67	0.03
68	00 00
69	00 00
770	0.02
71	0.01
72	0.02
73	0.08
74	0.16
75	0.13
76	0.13
77	0.10
78	0.01
79	00 00
780	0.03
81	0.05

	LT	RT
782		0.01
83	0.08	
84	0.05	
85	0.16	
86	0.02	
87		0.10
88		0.10
89		0.07
790		0.02
91		0.02
92		0.00
93	0.02	
94		0.00
95		0.03
96	0.05	
97	0.11	
98	0.09	
99	0.08	

	LT	RT
800	0.03	
01		00 00
02		0.06
03		0.06
04		0.14
05		0.15
06		0.01
07		0.02
08		0.02
09		0.08
810		0.08
11		0.03
12		0.02
13		0.05
14		0.04
15		0.04
16		0.13
17		0.05

	LT	RT
818		0.08
19		0.21
820		0.10
21	0.01	
22	00 00	
23	0.05	
24	0.03	
25	0.05	
26		0.02
27	00 00	
28		0.10
29		0.03
830	00 00	
31	00 00	
32		0.01
33	0.02	
34		0.01
35		0.05

	LT	RT
835		0.05
37		0.10
38	00 00	
39	0.02	
840		0.07
41		0.05
42		0.11
43		0.06
44		0.12
45		0.18
46		0.24
47		0.24
48		0.09
49		0.01
850		0.01
51		0.02
52		0.02
53		0.05

	LT	RT
854		0.05
55		0.04
56		0.09
57		0.15
58		0.10
59	0.03	
60		0.06
61	0.04	
62	0.06	
63	0.08	
64	0.03	
65	0.05	
66	0.03	
67		0.02
68	0.01	
69		0.15
70		0.12
71		0.02

	LT	RT
872		0.09
73		0.03
74	0.01	
75		0.06
76		0.04
77	0.04	
78	0.11	
79	0.02	
880		0.05
81	0.03	
82	0.58	
83		0.06
84		0.08
85		0.16
86		0.13
87		0.03
88		0.28
89		0.06

	Lt	Rt
890		0.12
91		0.09
92		0.10
93		0.09
94		0.07
95		0.06
96		0.06
97	0.05	
98		0.02
99		0.13
900		0.13
01		0.11
02	0.02	
03		0.03
04		0.09
05	493+46+-	0.13
06		0.15
07		0.26

RIB No.	Note Last Spad before May 9 493+30+-	Lt	Rt
908			0.30
09			0.30
910	493+76+-		0.29
11	6-11-47 OK. from here LEONARD, NIENOW, PAHY.		0.14
12		D.03	
13			0.03
14			0.11
15			0.06
16			0.07
17		00.00	
18		00.00	
19		0.04	
920		00.00	
21			0.07
22		0.04	
23		0.08	
24		0.03	
25		0.03	

6-11-47  
LEONARD, NICHOW, FAHY

RIB No.	LT.	RT.
926		0.01
27		0.06
28	00.00	
29	0.06	
30	0.10	
31		0.05
32		0.05
33	00.00	
34	0.02	
35	0.06	
36	0.03	
37	0.02	
38	00.00	
39	0.03	
40	0.08	
41		0.01
42		0.02
43		0.10

RIB No.	LT.	RT.
944		0.05
45	0.02	
46		0.04
47	00.00	
48		0.05
49	00.00	
50		0.10
51		0.09
52		0.03
53		0.05
54		0.04
55		0.05
56		0.05
57		0.12
58	0.07	
59	00.00	
60	0.06	
61	0.06	

Rib  
No.6-11-47  
LEONARD, NIENOW, FAHY.  
CENTER OFFSETS.  
LT. RT.

962

0.07

63

0.01

64

0.13

65

0.02

66

0.03

67

0.09

68

0.10

69

0.02

70

0.06

71

0.04

72

00.00

73

0.01

74

0.10

75

0.05

6-18-45  
LEONARD, FAHY.

976

0.05

977

0.02

978

0.0

Rib  
No.6-18-47 65  
CENTER OFFSETS

LT.

RT.

979

0.10

80

0.01

81

0.03

82

0.03

83

0.09

84

0.02

85

0.08

86

0.02

87

0.07

88

0.04

89

0.02

990

0.08

91

0.10

92

0.01

93

0.05

94

0.01

95

0.0

96

0.0

Rib No.	6-18-49 Center Offsets	
	Lt.	Rt.
999	0.05	
998	0.0	
999		0.05
1000		0.09
1001		0.09
1002		0.05
1003		0.15
1004		0.02
1005		0.08
1006	0.0	
1007		0.03
1008		0.08
1009	0.0	
1010	0.03	
1011	0.03	
1012		0.05
1013		0.05
1014		0.04

Rib No.	6-18-49 66 Center Offsets	
	Lt.	Rt.
1015	0.06	
1016		0.04
1017	0.01	
1018	0.02	
1019	0.03	
1020	0.04	
1021	0.04	
1022	0.10	
1023	0.09	
1024	0.06	
1025	0.09	
1026	0.09	
1027	0.05	
1028		0.0
1029		0.04
1030	0.02	
1031	0.02	
1032	0.01	



R16 No.	Center Offsets	
	Lt.	Rt.
1033	0.06	
1034	0.02	
1035	0.08	
1036		0.02
1037	0.06	
1038	0.05	
1039		0.01
1040	0.0	
1041	0.02	
1042	0.0	
1043		0.05
1044	0.08	
1045	0.07	
1046	0.10	
1047	0.02	
1048	0.13	
1049	0.08	
1050	0.05	

R13 No.	CENTER OFFSETS 67.	
	Lt.	Rt.
1051		0.20
1052		0.12
1053	0.0	
1054		0.03
1055		0.04
1056	0.05	
1057	0.02	
1058	0.02	
1059	0.01	
1060		0.06
1061		0.0
1062	0.01	
1063	0.07	
1064	0.04	
1065	0.10	
1066		0.02
1067		0.02
1068		0.05

Rib No.	CENTER OFFSETS	
	LT.	RT.
1069	0.08	
1070	0.05	
1071		0.10
1072		0.09
1073		0.03
1074		0.01
1075		0.01
1076	0.05	
1077	0.02	
1078		0.03
1079	0.07	
1080	0.0	
1081	0.02	
1082	0.05	
1083	0.02	
1084		0.04
1085	0.20	
1086	0.11	

Rib No.	CENTER OFFSETS.	
	LT.	RT.
1087	0.06	
1088	0.0	
1089	0.03	
1090		0.01
1091	0.02	
1092	0.09	
1093	0.07	
1094	0.0	
1095	0.08	
1096		0.03
1097		0.03
1098		0.02
1099	0.0	
1100	0.0	
1101	0.03	0.0
1102	0.02	
1103	0.03	
1104	0.0	

	Lt	Rt
1105		0.04
1106	0	0
1107		0.03
1108		0.01
1109	0.01	
1110	0.04	
1111	0.05	
1112		0.09
1113		0.04
1114	0.04	
1115	0.04	0.01
1116		0.03
1117		0.10
1118		0.09
1119		0.06
1120	0	0
1121	0.02	
1122		0
1123	0.03	

69

1124	0.05
1125	0.02
1126	0.02
1127	0.02
1128	0.03
1129	0.05
1130	0.03
1131	0.06
1132	0.07
1133	0.05
1134	0.09
1135	0.03
1136	

↑  
553.31

#	Standard		
#21		+2.02	555.33
#22	"	+1.90	.21
#23	"	+1.84	.15
24	"	+2.04	.35
25	"	+1.97	.28
26	"	+1.84	.15
27	"	+1.70	.01
28	"	+1.71	.02
29	"	+1.88	.19
30	"	+1.85	.16
31	"	+1.93	.24
32	"	+2.02	.33
33	"	+2.02	.33
34	"	+2.05	.36
35	"	+2.13	.44
36	"	+2.20	.51
37	"	+2.35	.66
38	"	+2.28	.59

↑  
553.81

70

#	Standard		
#39		+2.41	555.72
40	"	+2.43	.74
41	"	+2.37	.68
42	"	+2.42	.73
43	"	+2.49	.80
44	"	+2.30	.61
45	"	+2.49	.80
46	"	+2.48	.79
47	"	+2.44	.75
		+2.30	.61
48	"	+2.45	.76
49	"	+2.49	.80
50	"	+2.45	.76

Dec 11, 45

BM	545	553.73	3482.8
#51		+2.11	555.84
52		+2.08	.81
53		+2.01	.74
54		+1.90	.63

↑  
553.73

55	+1.89	555.62
56	+2.03	.76
57	+1.92	.65
58	+1.96	.69
59	+2.05	.78
60	+1.92	.65
61	+1.95	.68
62	+1.82	.55
63	+1.95	.68
64	+1.91	.64
65	+1.87	.60
66	+1.81	.54
67	+1.89	.62
68	+1.82	.55
69	+1.96	.69
70	+2.02	.75
71	+2.02	.75
72	+1.96	.69

↑  
553.73

71

73	+1.80	555.53
74	+1.98	.71
75	+1.82	.55
76	Colleton	+2.05 .78
77	"	+2.02 .75
78	"	+2.07 .80
79		+2.20 .93
80	Gothic on Tit	+2.21 .94
81	"	+2.42 556.15
79	-2.37 553.78	+2.42 556.15
82	"	+2.28 556.06
83	"	+2.25 .03
84	"	+2.28 .06
85		+2.35 .13
check		-4.82 548.96
		548.94 Record
		0.02

Rib No.	RIB ELEV. CONT'D FROM PP. 60.	T	RIB. ELEV.	
	556.81			
1025	1.71	57.52	557.37	
1026	1.72	57.53	"	
1027	1.76	57.57	557.38	
1028	1.74	57.55	"	
1029	1.65	57.46	"	
1030	1.73	57.54	"	
1031	1.75	57.56	"	
1032	1.74	57.55	"	
1033	1.70	57.51	"	
1034	1.75	57.56	557.39	
1035	1.80	57.61	"	
1036	1.70	57.51	"	
1037	1.71	57.52	"	
1038	1.69	57.50	"	
1039	1.67	57.48	"	
1040	1.72	57.53	557.40	
1041	1.81	57.62	"	
1042	1.84	57.65	"	

-5.46 550.35 B.M. AT  
STA. 501.

Rib No.	RIB. ELEVATIONS.	T	RIB. ELEV.	R.M.
	+ 483	554.88		550.05
R.M. 1048				1 see F. 8712 P. 30
1048	2.70	57.58	557.40	
1044	2.67	57.55	"	
1045	2.71	57.59	"	
1046	2.64	57.52	557.41	
1047	2.76	57.64	"	
1048	2.68	57.56	"	
1049	2.88	57.76	"	
1050	2.93	57.81	"	
1051	2.86	57.74	"	
1052	2.85	57.73	557.42	
1053	2.61	57.49	"	
1054	2.75	57.63	557.56	
1055	2.68	57.56	557.42	
1056	2.71	57.59	"	
1057	2.73	57.61	"	
1058	2.67	57.55	557.43	
1059	2.74	57.62	"	

RIB No.	T 554.88	+	RIB ELEV.	B.M.
1060		2.92	57.80	557.43
61		2.78	57.66	"
62		2.70	57.58	"
63		2.72	57.60	"
64		2.72	57.60	"
65		2.72	57.60	557.44
66		2.75	57.63	"
67		2.72	57.60	"
68		2.73	57.61	"
69		2.69	57.57	"
1070		2.77	57.65	"
71		2.71	57.59	557.45
72		2.77	57.65	"
73		2.73	57.61	"
74		2.74	57.62	"
75		2.74	57.62	"
B.M. 501135 76	+ 6.26	556.31	- 4.83	" 55005
		1.34	57.65	55005
77		1.34	57.65	557.46

T 556.31	+	P.L.Elev	B.M. 73
	1.37	57.68	557.46
1078		1.36	57.67
79		1.36	57.67
1080		1.27	57.58
81		1.37	57.68
82		1.38	57.69
83		1.42	57.73
84		1.39	57.70
85		1.34	57.65
86		1.22	57.53
87		1.29	57.60
88		1.27	57.58
89		1.29	57.60
1090		1.29	57.60
91	5.97	556.02	55005
92			
93			
94			
95			

Bliss  
Leonard  
Baker  
12/17/47

Rib Elevs. East Portal Rib # - 14  
to Rib # 50

BM.	Rib #	Collation		
	4.93	553.21		548.28
-14			+2.70	555.91
-13	Gothic		+2.47	555.68
-12	"		+2.43	555.64
-11	"		+2.39	555.60
-10	"		+2.43	555.64
-9	"		+2.40	555.61
-8	"		+2.43	.64
-7	"		+2.37	.58
-6	"		+2.34	.55
-5	"		+2.32	.53
-4	"		+2.36	.57
-3	"		+2.38	.59
-2	"		+2.33	.54
-1	"		+2.28	.49
#1	Standard		+2.56	555.77
#1A	"		+2.30	.51
#2	"		+2.43	.64
#3	"		+2.38	.59

#	Standard			
#4			+2.44	555.65
#5	"		+2.65	.86
#6	"		+2.69	.90
#7	"		+2.52	.83
#8	"		+2.33	.54
#9	"		+2.34	.55
#10	"		+2.17	.38
#11	"		+2.44	.65
#12	"		+2.43	.64
T.P.	5.03	553.31	4.93	548.28
#13	"		+2.19	555.50
#14	"		+1.82	.13
#15	"		+1.81	.12
#16	"		+1.75	.06
#17	"		+1.90	.21
#18	"		+1.93	.24
#19	"		+1.98	.29
#20	"		+1.94	.25

Continued on Page 70



Bliss  
Leonard  
Baker  
12/7/47

Spring line of sets  
East Portal Rib - 14 to Rib #150

	S	N
-14 Portal	3.72	3.75
-13	3.79	3.68
-12	3.80	3.77
-11	3.82	3.75
-10	3.85	3.71
-09	3.78	3.67
-08	3.75	3.65
-07	3.77	3.70
-06	3.76	3.63
-05	3.75	3.71
-04	3.74	3.58
-03	3.73	3.61
-02	3.72	3.67
-01	3.74	3.65
#1 Spare	3.74	3.63
#1A	3.73	3.64
#2		
#3		

	S	N
#4	3.73	3.60
#5	3.68	3.57
#6	3.68	3.59
#7	3.70	3.67
#8	3.75	3.60
#9	3.73	3.56
#10	3.67	3.82
#11	3.60	3.64
#12	3.61	3.61
13	3.58	3.65
14	3.74	3.67
15	3.73	3.66
16	3.73	3.60
17	3.79	3.58
18	3.72	3.68
19	3.76	3.61
20	3.74	3.63
21	3.59	3.57

Rib#	S	N	Rib#	S	N
22	3.72	3.63	40	3.67	3.62
23	3.69	3.62	41	3.61	3.55
24	3.68	3.62	42	3.68	3.55
25	3.73	3.54	43	3.66	3.55
26	3.75	3.53	44	3.63	3.72
27	3.81	3.61	45	3.57	3.52
28	3.73	3.67	46	3.75	3.50
29	3.67	3.61	47	3.81	3.64
30	3.58	3.65	48	3.57	3.61
31	3.63	3.64	49	3.60	3.66
32	3.66	3.67	50	3.72	3.58
33	3.64	3.63	51	3.67	3.54
34	3.63	3.65	52	3.79	3.55
35	3.64	3.51	53	3.76	3.58
36	3.61	3.61	54	3.84	3.50
37	3.61	3.56	55	3.71	3.75
38	3.65	3.75	56	3.76	3.51
39	3.59	3.64	57	3.62	3.65

	S	N		S	N
58	3.66	3.55	76	3.74	3.42
59	3.56	3.54	77	3.75	3.44
60	3.63	3.59	78	3.69	3.45
61	3.75	3.42	79	3.63	3.46
62	3.71	3.52	80	3.72	3.50
63	3.67	3.50	81	3.73	3.44
64	3.69	3.65	82	3.73	3.48
65	3.74	3.60	83	3.77	3.52
66	3.60	3.60	84	3.74	3.61
67	3.73	3.55	85	3.77	3.57
68	3.63	3.49			
69	3.66	3.46			
70	3.64	3.37			
71	3.74	3.50			
72	3.69	3.50			
73	3.82	3.56			
74	3.76	3.42			
75	3.74	3.45			

Bliss  
King  
Fehr  
8/13/47

Colvert at Lake Side

Farms West Portion

Cut Stake  
West Side  
Road 7.00

2	BM	4.3	
2	0+00		6.1
2	0+30		7.0
2	0+60		8.4
3	Ground 0+00		7.0
3	0+30		7.6
3	0+60		7.0

67  
415  
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23757 at Tunnel Sun day

Please Return to  
 City of San Diego Water Dept.  
 Room 268 Civic Center  
 Telephone Main 5161

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.  
 Roadway 16 feet wide. Side Slopes 1 on 1 1/2  
 For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9 + (20 - 16) ÷ 2 or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.