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22' Road

Sta.	Ground	Pr. Grade	Left.	Right.
107	509.0	513.0	0.0	0.0
106	510.4	513.0		3'
105	511.2	513.0		6'
104	512.5	513.0		9'
103+50	514.6	513.0		11'
103	517.0	513.6		7'
102	516.0	516.0		5.0'
101+75	516.0	517.5	0.0	5.0
101	517.2	517.5		5.0
100	519.0	519.5		5.0
99	517.5	517.5		5.0
98	521.6	521.0		5.0
97	524.6	524.6		5.0
96+223	526.0	525.0		3.0
95+94	527.7	525.5		4.0
95	526.0	527.2		5.0
94+56	530.0	528.0		6.0
94+27.4	527.0	526.6		6.0
94+10	527.5	525.8		6.0
93	521.3	520.5		6.0
92+22	520.0	520.0	0.0	2.0
91+63	522.6	523.5	2.0	
91+18	527.0	527.0	0.0	0.0
89+68	540.5	535.0	0.0	0.0
89	542.0	536.2		7.0

Jan. 13, 32
W.M.B. 1

Note:-

The Φ of the road is with refer
ence to the pipeline survey.

Barrow from here

Sta.	Ground	Proposed	Left & Right	
88	560	538.1	4.0	
87+75	562	538.6	4.0	
87+38	560.7	537.5	4.0	
86+50	555.3	536.5	6.0	
86+09	Road 540.0	535.6	0.0	0.0
85+10	534.7	534.5	0.0	0.0
84+00	Road 527.0	533.0	5.0	
83+43	542.5	530.0	0.0	
82+95	540.7	530.0		5.0
80+54	534.3	527.0	4.0	
79+75	530.0	525.0	0.0	0.0
77+50	523.8	523.5	0.0	0.0
75+00	528.8	528.0		3.0
73+75	535.5	530.0		13.0
71+50	529.0	529.0		20.0
69+00	531.0	533.0	5'	
67+47	542.3	542.0		11.0
66+00	546.4	546.0		11.0
65+08	546.3	545.0		11.0
62+25	535.6	536.0	0.0	0.0

End of borrow
Do not want in River bed.

Work stops here

New line No stakes.

Sta.	Ground	ProGrade	Left & Right.
60+50	533.6	532.5	5'
59+25	533.7	531.5	5'
58+00	532.9	531.0	4'
57+00	532.8	530.5	10'
56+00	534.0	530.0	6'

22' Road.

1-14-32

W.M.B.

4

Sta.	Elev. Road	P.M.P. Grade	Left & Right Pipe Line	Align.
17+00 Tangent.	575.0	575.0		12'
19+57 ²⁵ Tangent	590.0	581.0		11' Δ LT.
21+50 Tangent.	573.0	577.0		1' Δ LT.
23+14 Tangent	563.0	565.0	0.0	0.0 Δ RT.
24+50 Tangent	559.0	560.0		7.0 Δ RT.
26+00 Tangent	561.0	562.0		13.0 Δ LT.
27+50 Tangent.	554.0	554.0		18.0 Δ LT.
29+50 Tangent.	551.0	551.0		14.0 Δ RT.
32+00 Tangent.	548.0	550.0		10.0 Δ RT.
33+31 Tangent	549.0	548.0		4.0
33+98 Tangent				
36+12 Tangent	539.0	546.0		4.0'

Note: Referenced to Pipeline Survey
Watch for High water marks from Pipe
Line Survey.

Engineer's Camp. Start

Engineer's Camp - Start of Boulders.
End at 31+00.
Through Point.
Start of Ledge Rock. (See H.W. notes).

(See H.W. notes)

(See H.W. Notes)

Sta	Elev Road	Prop Grade	Left & Right Pipe Line	Align.	
36+83 Misc.	539.0	544.0		4.0' ΔLT.	Through Point. [See Men Alignment].
44+75 Tangent.	538.0	539.0		5.0' ΔLT.	End Men Alignment. [old stations].
47+00 Tangent	536.0	536.00		20.0' ΔRT.	
50+52 Tangent	534.0	535.6		3.0' ΔRT.	
53+35 Tangent	529.0	530.0		11.0' ΔLT.	
54+60 Tangent	528.8	534.0	0.0	0.0' Δ	Keep slope on old Road. (See H. W. Notes)
59+25 Misc.	531.0	531.0		3.0' ΔLT.	
62+25 Misc.	535.0	538.0	11.0	ΔLT.	New Alignment. See Notes.
65+08 Tangent	545.0	546.0		4.0' ΔRT.	on old Road.
69+75 Tangent	529.0 170 X sections			2.0' Δ P.O.T.	West of El Monte Ranch Entrance. Cut across flat.
75+00 Tangent	528.0	529.0		5.0' Δ P.O.T.	on old Road
77+00 Tangent	523.0	524.0		11.0' Δ RT.	

Sta. Elv. Road Prop. Grade Left & Right Align.
PIPE
Line.

79+75 521.0 524.0 5.0' Δ RT.

Tangent.

82+95 526.0 529.0 5.0' Δ LT.

83+43 526.0 530.0 0.0 0.0 Δ LT.

Hold on Old road.

85+17 533.0 Δ RT.

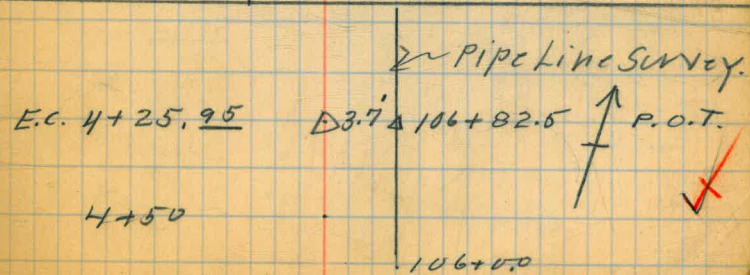
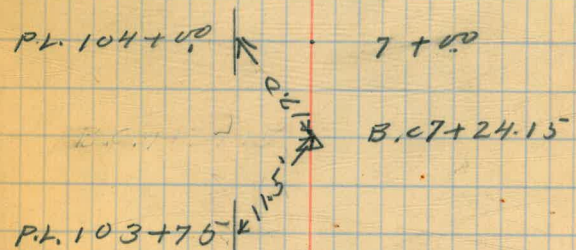
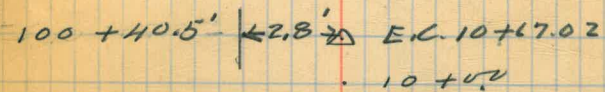
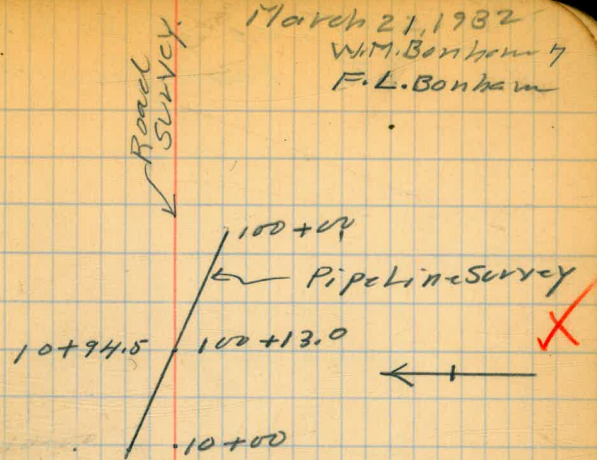
Start of Decomposed Granite
 (see profile for grade Put no granite
 into river.

88+25

End of granite.

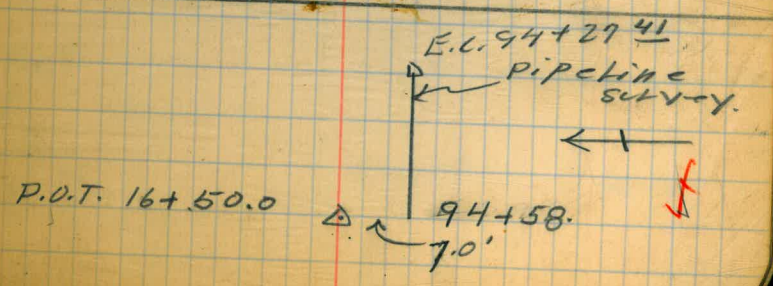
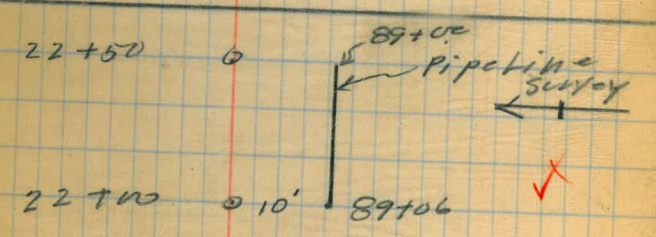
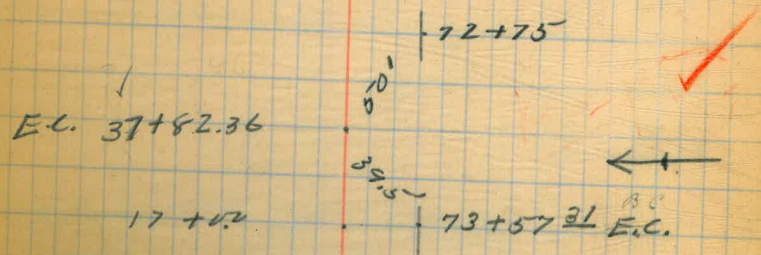
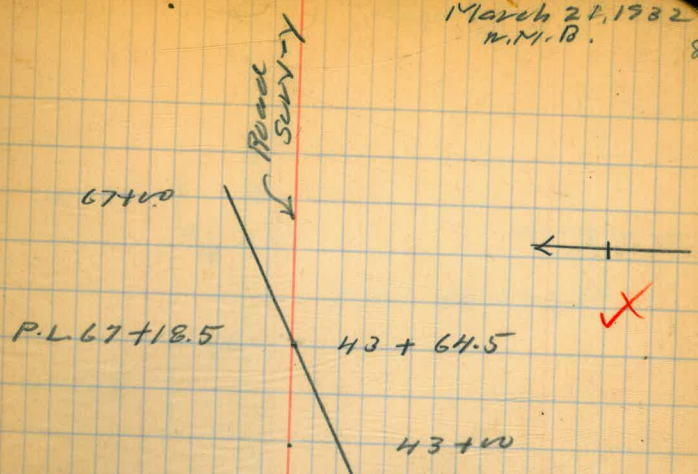
Ties
Pipe Line Survey to Road Survey.

March 21, 1932
W.M. Bonham
F.L. Bonham



Ties Pipeline Survey
To Road Survey.

March 21, 1932
W.M.B. 8



March 21, 1932
W.M.B.

9

⊥ Road Survey.

40+25

5' 8"



P.R.C. 69+28.22

40+75

36"



63+00



EC 47+52.05

1.5'

62+34.5

4

P.L. 48+860

4.5'

61+00

X

49+00

60+00

51+75

31.5'

58+00



52+00

35.5'

67+00



March 21, 1932
R.M.B. 10

f Road Survey

E.C. 30+09⁰³ 3.5' 79+75 ✓

36+00.6 10' E.C. 73+85.51 ✓
37+02

P.I. 38+91.43 27.5' 70+98 ✓
70+02

Location
 Old Road
 Sta. 77+10 - 89+68

Pipeline Sta.	Road Sta.
78+68	32+45
79+58	31+55
81+03	30+10
82+07	29+10
82+72	28+45
83+49	27+65
84+78	26+35
86+29	24+85
86+89	24+25
87+82	23+24

3-21, 1932

11

Note: Distances given are with
 reference to the road survey taken
 from X-section sheets.

36'	26'	⊕
46'	34'	
27'	16'	
35'	21'	
20'	8'	
43'	27'	
	12'	⊕
	10'	3'
	6'	11'
	12'	⊕

Levels on Chocolate
Creek Trail Road.

April 8, 1932

12

B.M.	10.10	781.66		771.56	0+00 Baseline for Bridge Crossing.
T.P.	0.73	770.10	12.29	769.37	
84+43 ⁰³				7.9	62.2 . End of Line on old Road.
+08				10.3	59.8 .
+04				18.2	54.9 . No pipe
84				10.4	59.7 .
+50				6.6	63.5 .
+25				4.9	65.2 .
+10				16.9	53.2 . 15" Pipe
83				2.5	67.6 .
+90				1.6	68.5 .
+80				2.5	67.6 .
T.P.	6.85	776.05	0.90	769.20	Peg Sta. 82+70
+65				6.2	69.8 .
+45				8.0	68.0 .
82				5.4	70.6 .
+94 ¹² Δ RT.				4.7	71.3 .
+57				7.6	68.4 .
+48				14.4	61.6 . 15" Pipe
+33				7.7	68.3 .
81				5.8	70.2 .
+50				7.6	68.4 .
80				9.4	66.6 .
T.P.	4.06	771.34	8.77	767.28	Top of Guard Stake Sta. 80+00
+50				5.8	66.5 .
	21.74		21.96		
					21.96 771.56
					21.74 771.34
					.22 .22

771.34

79				5.8	765.5	
+50				4.3	67.0	
78				2.7	68.6	
77 + 96 ⁹⁵	Δ LT.			2.6	68.7	
+82				2.0	69.3	
T.P.	9.04	778.47	1.91		769.43	peg Sta. 77 + 83
+65				6.6	71.9	
+50				5.9	72.6	
+38				5.1	73.4	
+28				6.6	71.9	
+20				10.4	68.1	12" Pipe
+11				7.4	71.1	
77				7.0	71.5	
76 + 66 ⁹²	Δ RT.			5.0	73.5	
+50				2.3	76.2	
+25				0.8	77.7	
+10				3.8	74.7	
76				3.3	75.2	
+50				3.9	74.6	
+25				4.5	74.0	
75				6.6	71.9	
+82				8.6	69.9	
T.P.	1.27	772.16	7.58		770.89	peg Sta. 74 + 70
+50				3.5	68.7	
+22				2.7	69.5	

10.31

9.49

$$\begin{array}{r} 10.31 \\ 9.49 \\ \hline .82 \end{array}$$

$$\begin{array}{r} 772.16 \\ 771.34 \\ \hline .82 \end{array}$$

772.16

74 1.9 770.3

+65 1.3 70.9

+50 1.9 70.3

73 +16²⁰ Δ Lt. 4.6 67.6

73 4.0 68.2

+80 0.7 71.5

+50 4.7 67.5

72 9.5 62.7

+85 13.7 58.5 24" Pipe

+75 6.0 66.2

+50 2.8 69.4

71 +41⁶⁹ Δ Rt. 2.4 69.8

T.P. 3.76 773.48 2.44 769.72 Peg Sta. 71+42

71 0.0 73.5

+70 4.4 69.1 On old Road.

70 +53³³ Δ Lt. 2.8 70.7

+50 1.9 71.6

T.P. 13.16 786.17 0.47 773.01

70 5.2 81.0

69 +94⁶² Δ Lt. 3.6 82.6

+50 3.8 82.4

T.P. 11.91 797.46 0.62 785.55 Peg Sta. 69+30

+30 8.3 89.2

69 +17⁵⁰ Δ Rt. 10.7 86.8

+06 14.9 82.6

28.83 3.53

28.83 797.46
3.53 772.16
25.30 25.30

69				12.5	785.0	
+75				5.3	92.2	
+60				9.6	87.9	
+50				8.4	89.1	
68 +30	Δ LT.			4.3	93.2	
68				4.8	92.7	
67 +75	Δ RT			3.0	94.5	
+30				9.4	88.1	15" Pipe
T.P.	12.44	809.74	0.16		797.30	Peg Sta. 67+25
67				6.2	808.5	
+65				0.2	9.5	
T.P.	5.50	815.13	0.11		809.63	Peg Sta. 66+60
+50				5.0	10.1	
66				4.9	10.2	
+80				3.5	11.6	
+50				7.6	07.5	
65				1.3	11.8	
+62				6.4	08.7	
+50				5.0	10.1	
64 +20	Δ LT.			1.0	14.1	
T.P.	4.70	818.88	0.95		814.18	Peg Sta. 64+16
64				2.2	16.7	
+75				2.6	16.3	
+60				6.8	12.1	
+50				13.3	05.6	
	22.64		1.22			

22.64	818.88
1.22	797.46
<hr/> 21.42	<hr/> 21.42

818.88

63+38 21.7 797.2

+25 22.6 96.3

36" Pipe

63 15.4 803.5

+75 4.8 14.1

+50 2.5 16.4

62+25 ΔLT. 2.2 16.7

T.P. 8.37 825.06 2.19 816.69

Peg Sta. 62+25

62 5.0 20.1

+75 3.3 21.8

+50 4.5 20.6

61 6.0 19.1

+70 12.0 18.1

No pipe

+50 7.0 18.1

T.P. 1.05 824.01

Peg Sta. 60+30

Continued on Page 29.

April 11, 1932

T.P. 1.14 1050.42 1049.28

Rock. 31+80 Continued from page 28.

32+50 0.7 49.7

+85 9.6 40.8

+98 19.6 30.8

No pipe

33+15 11.2 39.2

T.P. 0.42 1039.01 11.83 1038.59

Peg Sta. 33+30

+35 1.8 37.2

+40 7.1 31.9

No pipe

+50 4.3 34.7

1.52

11.83

1049.28
1039.01
10.27

11.83
1.52
10.27

1037.01

33+80 6.4 1032.6

34 9.7 29.3

T.P. 4.68 1031.78 11.91 1027.10 Peg Sta.

+45 9.2 22.6

+50 10.8 21.0

+70 20.1 11.7 12" Pipe

35 8.7 23.1

+15 6.6 25.2

+40 11.0 20.8 No pipe

+50 5.2 26.6

+55 2.5 29.3

+90 0.7 31.1

36 1.7 30.1

+10 3.5 28.3

+30 9.8 22.0

+40 14.9 16.9

+50 8.1 23.7

+75 10.8 21.0

12" pipe Note:- & shifted. Profile not
run. Profile plotted from slopes at
stations.

No pipe

T.P. 7.43 1038.46 0.75 1031.03 Peg Sta. 36+97

37 6.4 32.1

+20 1.7 36.8

+50 1.4 37.1

+70 2.0 36.5

1006
90

38 7.8 30.7

T.P. 0.02 1026.62 11.86 1026.60 Peg Sta. 38+12

12.13 24.52

1039.01 24.52
12.13
12.39

1026.62

38+25
+50
+60

41 1022.5
8.2 184.
10.0 166.

T.P. 0.11 1015.02 11.71 1014.91

Peg Sta. 38+65

39

11.9 03.1

T.P. 0.84 1003.88 11.98 1003.04

Peg Sta. 39+00

+18
+32
+50

8.1 95.8
4.2 99.7
4.6 99.3

12" Pipe

989
20

987
24

39+99⁸⁰ ΔLT.

11.1 02.8

T.P. 0.14 992.74 11.28 992.60

Peg Sta. 40+10

40+30
+50

3.2 989.3
11.9 80.8

o.k

T.P. 0.35 981.06 12.03 980.71

Peg Sta. 40+50

T.P. 2.47 971.77 11.78 969.28

Peg Sta. 40+

+93

16.4 66.4

12" Pipe

41

15.5 66.3

971
27

+35

16.3 66.5

+50

7.5 64.3

o.k

+65

4.1 67.7

+85

5.7 66.1

42

4.4 67.4

+30

1.9 69.9

+50

2.4 69.4

957
28

+74

5.9 65.9

		971.77				
42+82 ⁸	Δ R.T.			8.3	963.5	
T.P.	0.07	960.13	11.71		960.06	Peg. Sta. 42+90
43				4.2	55.5	o.k.
+10				9.2	50.9	
T.P.	0.18	948.43	11.88		948.25	Peg Sta. 43+15
+28				9.1	39.3	No pipe
+50				5.2	43.2	
44				9.7	38.7	
+38				5.8	42.2	
+50				4.8	43.2	935
+58				5.3	43.1	12
T.P.	0.18	936.71	11.90		931.53	Peg Sta. 44+85
45				2.8	33.9	
+10				5.7	31.0	
T.P.	1.10	926.09	11.72		924.99	Peg Sta. 45+25
+28				3.9	922.2	
+50				10.7	15.4	925
T.P.	2.85	917.40	11.54		914.55	14
+70				6.4	11.0	
+90				12.9	04.5	No pipe
46				9.7	07.7	
+50				10.9	06.5	914
47				7.0	10.4	12
+22				3.8	13.2	
+53 ¹⁴	P.O.T.			2.8	14.6	905
						15

		917.40			
47+80				6.5	910.9
48				10.3	907.1
T.P.	0.16	905.61	11.95		905.45
48+27 ⁶	DLT.			6.0	899.6
+50				4.2	901.4
48+67 ¹⁰	DLT.			7.1	98.5
T.P.	1.12	897.00	9.73		895.88
49				0.2	96.8
+41 ¹¹	B.C.R.T.			10.5	886.5
T.P.	2.65	888.82	10.79		886.21
+60				9.1	79.8
+72				11.5	77.4
+90				24.2	64.7
50+03				15.0	73.9
+65				3.2	85.7
+90				14.5	74.4
51+13 ⁴²	DLT.			1.0	89.9
+40				23.2	65.7
+50				16.8	72.1
+75				6.7	82.2
+85				9.1	79.8
	1.39	878.58	11.67		877.19
52				4.7	73.9
+15				14.4	64.2
+40				8.2	70.4

Peg Sta. 48+08

o.k. End of shifted
P.

Peg Sta. 48+75

Peg Sta. 49+45

24" Pipe

No pipe

12" Pipe

No pipe

878.58

52 +50

9.8 868.8

T.P. 0.54 867.22 11.90

866.68 Peg Sta. 52+60

+65

3.1 64.1

No pipe

+75

1.4 65.8

53

2.5 64.7

+10⁶⁰ ΔLT.

3.5 63.7

+25

3.0 64.2

+50

4.9 62.3

54

8.4 58.8

+25

9.4 57.8

T.P. 0.34 852.10 11.46

855.76 Peg Sta. 54+40

+50

3.5 52.6

55 ΔLT.

6.2 49.9

+50

8.6 47.5

12.07

844.03

T.P. backed up. Elev. 844.02

Continued on Page 29.

Trail Road
Profile Levels

Note: Copied from Page 76 Book 349.

S.M. B.M. #50 / on pin 4' RT. Power Pole 300'
Lt. Sta. 520 + 04.

B.M.	0.43	1338.44	12.75	1338.01	1325.67
0 + 00				1.41	24.50
+ 29.1				2.60	23.31
+ 50				3.3	22.6
+ 82				4.5	21.4
1				6.6	19.3
+ 40	Δ B.C.			12.0	13.9
+ 52				12.8	13.1
T.P.	0.41	1313.44	12.88	1313.03	
+ 75				2.7	10.7
2				5.1	08.3
+ 25				7.9	05.5
+ 50				10.3	03.1
T.P.	0.06	1300.67	12.83	1300.61	
+ 75				0.6	00.1
3				3.5	1297.2
+ 18				5.9	94.8
+ 25				2.6	98.1
+ 25				6.5	94.2
+ 32				7.5	93.2
+ 50				9.4	91.3
T.P.	0.58	1288.68	12.57	1288.10	
4				2.4	86.3
+ 25				4.6	84.1

Abandoned
Sec P
page 30

& Pavement
Edge of pavement

Reg Sta. 1453

Guard Stake Sta. 2775

84.4

Road.

79.4

74.4

0.0 83
10 41

0.0 80
8 44

0.0 75
11 39

1288.68							
4	+50			9.5	1279.2		
	+50			12.4	76.3	69.4	
	+55			10.8	77.9	road	69 74 72 0.0 89 23 6 3
T.P.	0.19	1276.12	1275		1275.93		Peg 20' Lt. Sta. 4+50
	+57			2.0	74.1		
	+75			3.5	72.6		
5				7.0	69.1	64.4	
	+25			9.6	66.5		64 66 20 5
T.P.	8.00	1270.98	13.14		1262.98		
	+50			5.5	65.5	59.4	
6				9.2	61.8	54.4	60 62 80 83 14 11 55 60 60 86 10 8
T.P.	0.32	1259.08	12.22		1258.76		
	+50			2.3	56.8	49.4	
	+75			4.3	54.8		53 35
7				8.7	50.4	44.4	48 48 33 8
	+11 ⁸¹	Δ Lt.		10.6	48.5		
T.P.	0.03	1247.22	11.89		1247.19		
	+25			2.8	44.4		
	+50			4.8	42.4	39.4	42 43 42 34 19 22
	+65			6.4	40.8		
	+71 ⁸¹	Δ Lt.		8.7	38.5		
T.P.	0.57	1136.27	11.52		1135.70		
8				1.8	34.5	34.4	
	+30			5.4	30.9		Level
	+50			5.2	31.1	29.4	28 30 26 20 13 24

1236.27

8+80				3.0	1233.3	
+93 ⁹¹	Δ LT.			3.4	32.9	
9				4.0	32.3	24 ⁴
+30				8.6	27.7	
+40				13.8	22.5	

33	26
33	49

T.P.	0.14	1223.53	12.88		1223.39	
+50	10.81	1212.16	11.68	4.2	19.3	17 ⁴
+75				1.7	10.5	16 ²
+85				10.0	02.2	15 ²
10				18.4	1193.8	14 ⁴
+115				24.1	88.1	12 ²
+33 ¹⁴	B.C.			15.6	90.5	11 ²
+57 ⁶				5.5	1206.7	8 ⁶
+82 ³	E.C.			7.3	04.9	

12² 36" Pipe

11				10.7	01.5	
T.P.	5.0	1199.03	13.13		1199.03	
+25				6.6	92.4	
+50				7.5	91.5	
B 11+81 ¹³	Δ B.C.			10.3	88.7	
A 12+89 ²³	B.C.					

Abandon 101
See page 31.

13				11.5	87.5	
+25				15.1	83.9	
T.P.	0.78	1182.81	16.50		1182.53	Peg. Sta. 13+35
+50				2.7	80.1	
+75				6.6	76.2	

1182.81

~~13+86 7.7 1175.1~~~~14 6.1 76.7~~~~+25 E.C. 5.3 77.5~~~~T.P. 4.89 1183.12 4.58 1178.23~~

Guard stake sta. 14+25

~~+50 4.5 78.6~~~~15 3.6 79.5~~~~+70 2.4 80.7~~~~+40³² Δ Lt. 5.6 77.5~~~~+80 B.C. Δ Rt. 4.3 78.8~~~~16 10.7 72.4~~~~+15 14.0 69.1~~~~+25 10.2 72.9~~~~+50 3.7 79.4~~~~+63 0 83.1~~~~+75 E.C. +0.4 83.5~~Note: - & shifted. No profile run.
Profile plotted from slopes at stations.~~17 8.5 74.6~~~~+23 19.3 63.8~~~~+50 15.8 67.3~~

Draw

T.P. 0.38 1170.75 12.75 1170.37

~~+57 3.7 67.0~~

T.P. 0.48 1150.43 12.80 1157.95

18 1.5 56.9

~~+16 7.1 51.3~~

Draw

~~+20 4.8 53.6~~~~+40 3.3 55.1~~63.
4059
15
56
2051
20

1158.43

18+50				4.8	53.6		46 24
+75	ΔLT.			10.3	48.1		
T.P.	0.28	1147.95	10.76		1147.67	Peg Sta. 18+78	
19				2.6	45.3		46
+50				7.8	40.1		36
+65				9.8	38.1		9
T.P.	0.19	1135.52	12.62		1135.33	Peg Sta. 10+75	
20				14.2	21.3	DLOW	
+17				7.8	27.7		
+38				6.7	28.8		
+50				8.1	27.4		
T.P.	0.10	1122.55	13.07		1122.45	Rock Sta. 20+90	Note! - End of shifted
21				3.9	18.7	φ.	
+08				6.6	16.0		
+35				21.0	01.6		
+50				10.6	12.0		
22				9.8	12.8		
T.P.	0.25	1109.75	12.85		1109.70		
+30				+1.0	11.0		
+50				6.7	03.2		
+55				7.7	02.2		
+69				4.0	05.9		
+75	ΔLT.			3.9	06.0		
23				7.8	02.1		
	0.19	1097.22	12.92		1097.03		

		1097.22			
23 +50				4.8	1092.4
+87				11.3	85.9
24				10.4	86.8
+23.74	Δ RT.			3.5	93.7
+50				9.8	87.4
	7.12	1091.79	12.55		1084.67
					Rock Sta. 24+52
+68				7.0	84.8
+75				13.65	78.1
25 +03				30.2	61.6
					Draw
+37				7.4	84.4
+50				5.7	86.1
26				1.4	90.4
T.P.	5.57	1097.22	0.14		1091.65
+32.60	Δ LT.			1.9	95.3
+50				3.2	94.0
27				12.7	84.5
T.P.	0.50	1085.02	12.70		1084.52
					Rock Sta. 27+03
T.P.	5.90	1080.56	10.36		1074.66
+50				10.3	70.3
+70				2.7	77.9
28				2.1	78.5
+40	Δ LT.			3.8	76.8
+50				4.1	76.5
+90				3.6	77.0
29				4.9	75.7

		1080.56			
29+50				11.1	1069.5
T.P.	5.33	1078.14	12.75		1067.81
30				6.3	66.8
+20	ΔLT.			7.6	65.5
+50				5.0	68.1
31	ΔLT.			9.1	64.0
T.P.	0.81	1061.80	12.15		1060.99
+50.50	ΔLT.			2.0	59.8
+75	ΔRT.			10.2	57.6
T.P.	2.49	1051.77	12.52		1049.28
+90				5.4	46.4
+95				8.6	43.2
32				12.4	39.4
+113				3.7	48.1
+25				1.1	50.7
T.P.	1.14	1050.42	2.49		1049.28

Rock Sta. 31+80

Continued on Page 16.

T.P.	9.06	833.07		824.01
60+10			2.2	30.9
60			0.9	32.2
+90			0.5	32.6
+70			9.6	23.5
+50			4.3	28.8
+40			1.9	31.2
+30			2.5	30.6
59			10.8	22.3
+85	E.C.		5.4	27.7
+75			13.2	19.9
+65			35.5	777.6
+50			27.0	806.1
+35			24.0	09.1
+25			17.3	15.8
58	B.C. RT.		8.3	24.8
+50			10.0	23.1
57			3.3	29.8
52+89 ²⁹	Δ LT.		2.4	30.7
T.P.	11.52	844.15	0.44	832.63
+50			7.9	36.2
+25	Δ		7.0	37.1
56			2.5	41.6
T.P.		0.13		844.02

Note:- Copied from Page 73 Book 349.
Sta. 60+30. Continued from Page 16

DROW

Continued Page 21.

Road re-location

April 15 - 32

C line Transit and level notes

1300.61 I.P.
Grade

guardstake 2+75 A line

10.72 1311.33

0+00 = P.O.V.	1.1	1310.2	
0+15	2.0	1309.3	1310
0+20	4.4	1306.9	1310
0+37.5	7.7	1303.6	08.75
0+50	8.4	1302.9	7.5
0+65	10.5	1300.8	6.0
0+84	12.2	1295.1	4.1
1+00	13.8	1297.5	2.5
1+25	16.4	1294.9	1300.
1+45	32.4	1278.9	98
1+50	29.3	1282.0	97.5
1+85	12.3	1299.0	94
2+00	9.7	1301.6	92.0
2+15	7.2	1304.1	90.5
2+50	11.3	1300.0	87.0

on south edge of old road

94.30' RT.

91.41' RT.

87.46' RT.

2+75.08 to P.I. 12°47' L ← 3+27.12 A
 2+54.88 = P.I. 28°27' L ← N 57°55'42" W
 2+75.00 A ← N 45°08'42" W 86.5

to E.C. 2+97.88 A line

0+37.50 P.I. 63°43' L + N 16°41'42" W

to A 2+75

0+00 = P.I.
with south line
and Pavement

90°00' R + N 47°0'18" E

N 42°58'42" W =
N 42°59'42" W.

Pavement 15' wide.
angle is turned from East edge of Pavement but stationing
counted from N. of Pav.

Re location contin. C line

Sta	10+61	to 13+71				
13+71.20	11.05	1189.28	11.8	1178.23	TP	old station 14+25
13+50			6.8	1182.5		13+71.70 =
13+00			3.6	1185.7		15+40.83.
12+63.30	P.1.		1.1	1188.2		
	11.67	1200.24	0.71	1188.57		
12+50			9.7	90.5		
12+00			3.9	96.3		
	10.69	1210.83	0.10	1200.14		
11+50			9.1	01.7		
11+00			4.5	06.3	4 1/2	
10+61	P.1.		0.5	10.8		
			3.9	1206.9	ground	

old station 14+25
13+71.70 =
15+40.83.

From Book 349 Page 71.
10+57 P.O.C. old line

15+80.0 B.C.Rt.

13+71.70 = 15+40.83 = $45^{\circ}58'15''$ N $26^{\circ}44'42''$ W

A 15+80 B.C.

12+63.30 P.1. Δ $51^{\circ}56'$ N $19^{\circ}13'18''$ E

C
10+61.17 = 10+61.17 B
P.1. Δ $46^{\circ}33'$ R $149^{\circ}09'18''$ E.

Offsets from Preliminary
Line to located line.

Pre. Sta.	Offset	Men. Sta.
1+85	Identical	1+85
2+55	20' RT. to ϕ	2+55
3+00	30' RT. to ϕ	2+80
3+53	30' RT. to ϕ	3+83
4+05	Identical	3+85
16+75	Identical	16+75
17+50	20' RT. to ϕ	17+53
18+75	20' RT. to ϕ Back Tang.	18+78
18+75		10' RT to ϕ Forward Tan. 18+88
19+00	8.75' RT to ϕ	19+13
20+00	3.75' RT to ϕ	20+13
20+75	Identical	20+88
36+50	Identical	36+50
37+00	45' RT. to ϕ .	37+15
+50	90' RT. to ϕ .	37+85
38+00	70' RT. to ϕ .	38+40
39+00	28' RT. to ϕ .	39+55
+20	20' RT. to ϕ	39+75
+50	24' RT. to ϕ	40+05
40+00	20' RT. to ϕ	40+57
+50	Identical	41+16
41	25' LT. to ϕ	41+72
+50	Identical	42+28

Pre. Sta.	offset	New Sta.
42+00	12.5' RT. to ϕ .	42+80
+50	25' RT. to ϕ	43+31
+83	Identical	43+72
43+50	4' RT. to ϕ	44+40
44+00	7' RT. to ϕ	44+90
+50	10' RT. to ϕ	45+40
45+00	Identical	45+91
+50	10' LT. to ϕ	46+42
46+00	10' LT. to ϕ	46+92
+50	10' LT. to ϕ	47+42
47+00	Identical	47+93
+50	10' RT. to ϕ	48+44
48+27	Identical	49+21

4 Cuts & Fills
Chocolate Creek.

Sta.	Cut.	Fill	Sta.	Cut	Fill
0+02	0.0	0.0	10+61		
+41.5		6.0	11		
+50		5.5	+50		
1		5.0	12		
+50		15.5	+50		
+78		Grade	13		
+85	5.0				
2	9.0		15+40		
+50			16		
3			+50		
+50			+75		
4			17		
+50			+50		
5			18		
+50			+50		
6			19		
+50			+50		
7			20		
+50			+50		
8			21		
+50			+50		
9			22		
+50			+50		
10			23		

2-14-34

PB
RCW.

37

Sweetwater Crossing

Pipe Line Change (1st Main P.L.) North end of
Sweetwater Bridge.

	+	H.I.	-	EI.	BM	
	5.27	66.87			61.6	Assume BM as nail on Pipe.
0+00			11.1	55.8		Stationing on Pipe in bottom.
			4.5	62.4		Floor of bridge Northend.
0+16			-5.1	61.8		Fence and South edge of road.
0+64			5.0	61.9		Where pipe comes out of ground north edge of road.
T.P.			2.34	64.43		
	12.14	76.57				
0+84			9.35	67.2		Point on top of Pipe.
0+89.8			7.68	68.9		↳ new Road on Pipe.
T.P.			.47	76.10		
	8.96	85.06				
1+29			5.93	79.1		Angle top of hill on Pipe.
1+64			2.89	82.2		point on pipe.
1+17			9.04			Point where edge of cut crosses pipe. Cut here 16'
End of Contract		142.5				

X-sections, above El Capitan Spillway

B.M.	0.49	984.89	984.40
E 5240 N 4630			965.2
E 5240 N 4640	15.6		969.3
E 5240 N 4650	11.7		973.2
E 5240 N 4670	6.2		78.7
E 5240 N 4680	5.0		79.9
E 5240 N 4690	3.6		81.3
E 5240 N 4700	2.1		82.8
E 5220 N 4630			71.2
E 5220 N 4640	12.8		72.1
E 5220 N 4650	9.1		75.8
E 5220 N 4660	6.7		78.2
E 5220 N 4670	4.9		80.0
E 5220 N 4680	3.3		81.6

Point on rock E 5774⁸ N 4700

5/1/42
Saper
Simpson
Davis

38

984.89

E5220 N4700

+0.5 985.4

Cont'd on page 46

X-sections of slide portion in Spillway

	0.0	750.0	750.0
2+40 - 29' RT			23.1 727.0
2+40 - 57' RT			15.5 734.5
2+60 ♀			22.6 27.4
" 11' LT			24.0 26.0
" 30' RT			15.2 34.8
" 50' RT			12.2 37.8
" 66' RT			7.6 42.4
2+80 ♀			20.0 30.0
" 16' LT			24.5 25.5
" 14' RT			15.0 35.0
" 29' RT			13.6 36.4
" 78' RT			+10.0 60.0
3+00 ♀			15.7 34.3
" 18' LT			25.0 25.0
" 6' RT			13.5 36.5
" 38' RT			11.4 38.2

lip of spillway

All x-sections are Lt or Rt of spillway ♀ and Rt ♂ to it.

edge of break.

2+90 = edge of wall & slough

750.0

3400 67 RT	+13.0	763.0
" 94 RT	+26.0	76.0
3420 6	15.5	34.5
" 7 LT	16.0	34.0
" 22 LT	25.6	24.4
" 40 RT	5.6	44.4
3440 6	15.7	34.3
10 LT	16.2	33.8
25 LT	26.4	23.6
15 RT	14.3	35.7
30 RT	10.7	39.3
3		
3460 6	16.7	33.3
" 14 4	18.2	31.8
" 28 LT	27.0	23.0
" 36 RT	8.2	41.8
3480 4	17.0	33.0
" 16 LT	19.3	30.7
30 LT	27.3	22.7
28 RT	11.7	38.3
40 RT	4.1	45.9
52		

750.0

3+80 56'RT +3.0 753.0

4+00 4 18.5 31.5

" 16'LT 20.0 30.0

" 32'LT 28.0 22.0

" 18'RT 15.5 34.5

" 34'RT 6.6 43.4

" 53'RT 2.1 47.9

4+20 4 20.0 30.0

" 19'LT 21.0 29.0

" 33'LT 28.6 21.4

" 8'RT 18.9 31.1

" 31'RT 8.0 42.0

" 55'RT 4.2 45.8

π 3.67 741.58 12.09 737.91

4+40 4 11.2 30.4

" 16'LT 12.2 29.4

" 34'LT 20.6 21.0

" 7'RT 9.8 31.8

" 25'RT 0.7 40.9

" 55'RT 0.2 41.4

4+60 4 11.7 29.9

741.58

4+60-13 Lt	12.7	728.9
" 25 Lt	21.2	20.4
" 10 Rt	10.0	31.6
" 24 Rt	2.9	38.7
57 Rt	4.0	37.6

4+80 ϕ	13.1	28.5
8 Lt	14.4	27.2
20 Lt	21.5	20.1
9 Rt	12.8	28.8
38 Rt	5.5	36.1
67 Rt	4.7	36.9

5+00 ϕ	16.0	25.6
3 Lt	16.0	25.6
10 Lt	22.0	19.6
25 Rt	13.4	28.2
38 Rt	7.6	34.0
71 Rt	9.9	31.7
T 428 732.93	12.93	728.65

5+06 ϕ	6.7	26.2
11 Lt	13.8	19.1
26 Rt	5.8	27.1
42 Rt	+0.7	33.6

73293

5+06.69RT		2.0	730.9
" 80RT		+0.3	33.2
5+15 ♀		13.1	19.8
" 18LT		14.9	18.0
" 7RT		8.0	24.9
" 31RT		6.3	26.6
" 42RT		1.8	31.1
" 77"		1.0	31.9
" 115"		+12.3	45.2
5+29 ♀		13.0	19.9
" 7LT		15.5	17.4
" 15RT		12.0	20.9
" 20RT		8.2	24.7
" 39RT		7.7	25.2
" 58RT		2.8	30.1
" 86RT		6.0	26.9
" 112RT		+4.0	36.9
" 77	1.74	723.62	11.05
			721.88
5+40 ♀		7.2	16.4
" 13RT		2.2	21.4
" 32RT		0.6	23.0
" 55RT		+2.0	25.6

All sections West of 5106 are taken at RT A to G of
spillway (same to 5110) produced.

floor

723.62

5	5+40	90 RT	+1.8	725.4
		106 RT	+7.2	30.8

at conc. wall

5	5+60	12 RT	9.3	14.3
		26 RT	0.0	23.6
		103 RT	+3.0	26.6

	5+80	16 RT	11.7	11.9
		25 RT	5.2	18.4
		51 RT	+0.8	24.4
		98 RT	+1.2	24.8

5	6+00	33 RT	14.8	08.8
	"	62 RT	+0.5	24.1
		93 RT	0.0	23.6
	TP	0.59	712.21	12.00
				711.62

	6+20	35 RT	7.2	05.0
		64 RT	+11.0	23.2
		90 RT	+11.0	23.2

	6+40	33 RT	11.0	01.2
		67 RT	+11.3	23.5
		87 RT	+11.1	23.3

712.21

6+60-32 RT			116.1	696.1
73 RT			+11.5	723.7
" 84 RT			+11.4	723.6
	0.59	699.81	1299	699.22

6+80-27 RT			9.5	690.3
54 RT			+8.0	707.8
67 RT			+15.0	714.8
76 RT			+16.5	716.3

Top of wall

7+00 - 28 RT			15.8	684.0
" 56 RT			2.6	697.2
65 RT			1.9	697.9
TP	0.60	687.53	1288	686.93

7+20 35 RT			9.6	77.9
" 54 RT			4.5	83.0

7+40 - No dirt in spillway.

18.3 669.2

floor of spillway sta 7+40

5/5/42
Soper
Davis

46

X-sections, above El Capitan Spillway

	0.54	984.94		984.40
E 5200 N 4630			13.0	971.9
" N 4650			9.9	75.0
" N 4680			5.0	79.9
" N 4700			1.2	83.7
E 5180 N 4630			13.8	971.1
" N 4660			10.4	74.5
" N 4680			8.5	76.4
" N 4700			4.4	80.5
E 5160 N 4630			15.7	969.2
" N 4680			12.7	72.2
" N 4700			7.6	77.3
TP	0.03	972.04	12.93	972.01
E 5140 N 4630			8.4	963.6
" N 4650			11.2	60.8
" N 4660			10.8	61.2
" N 4680			6.5	65.5
TP	0.55	959.66	12.93	959.11

959.66

E 5120 N 4630			7.6	952.1
" N 4660			7.0	52.7
" N 4680			3.4	56.3
π	1.40	947.99	13.07	946.59
E 5100 N 4630			9.3	938.7
" N 4680			0.5	47.5
			0.5	
E 5080 - N 4670			9.0	939.0
E 5060 - N 4670			14.8	933.2
π	1.26	936.48	12.67	935.32
E 5080 N 4630			10.4	926.1
E 5080 N 4650			7.6	
π	1.00	924.76	12.72	923.76
E 5060 N 4630			9.8	915.0
N 4650			1.1	23.7
N 4660			+5.0	29.8
E 5040 N 4630			16.3	908.5
N 4650			4.7	20.1
N 4670			+1.6	26.4
π	1.21	913.07	12.90	911.86

Northings and elevations of top of spillway cut
over slide area.

E 5240	N 4545	Elev	926 ⁰
E 5220	N 4543		924 ²
E 5200	N 4550		927 ⁰
E 5180	N 4602		964 ⁴
E 5160	N 4616		968 ⁻
E 5140	N 4615		961 ⁶
E 5120	N 4614		952 ⁻
E 5100	N 4606		934 ⁷
E 5080	N 4609		922 ¹
E 5060	N 4604		915 ⁰
E 5040	N 4600		901 ³
E 5020	N 4588		885 ⁸
E 5000	N 4570		868 ⁰
E 4980	N 4547		852 ⁰
E 4960	N 4535		838 ⁰

Additional x-sections from baseline in Spillway

	Dist	Vert. L	H.I. Rod	Hor. L	
π at 3+20 Elev 7595	101.7 (126)	+26°28'	4.9 4.9	90°	El 790.1
	126.4 (178)	+32°49'	4.9 4.9	"	" 820.9
	146.9 (208)	+33°08'	4.9 4.9	"	" 835.0

π at 3+60 El 752.3	168.0 (237)	+32°50'	4.9 4.9	"	El 846.6	same slope for 20' further
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π at 4+00 731.5	153.5 (204)	+30°06'	4.8 4.8	"	El 825.3	12' higher 7' further out.
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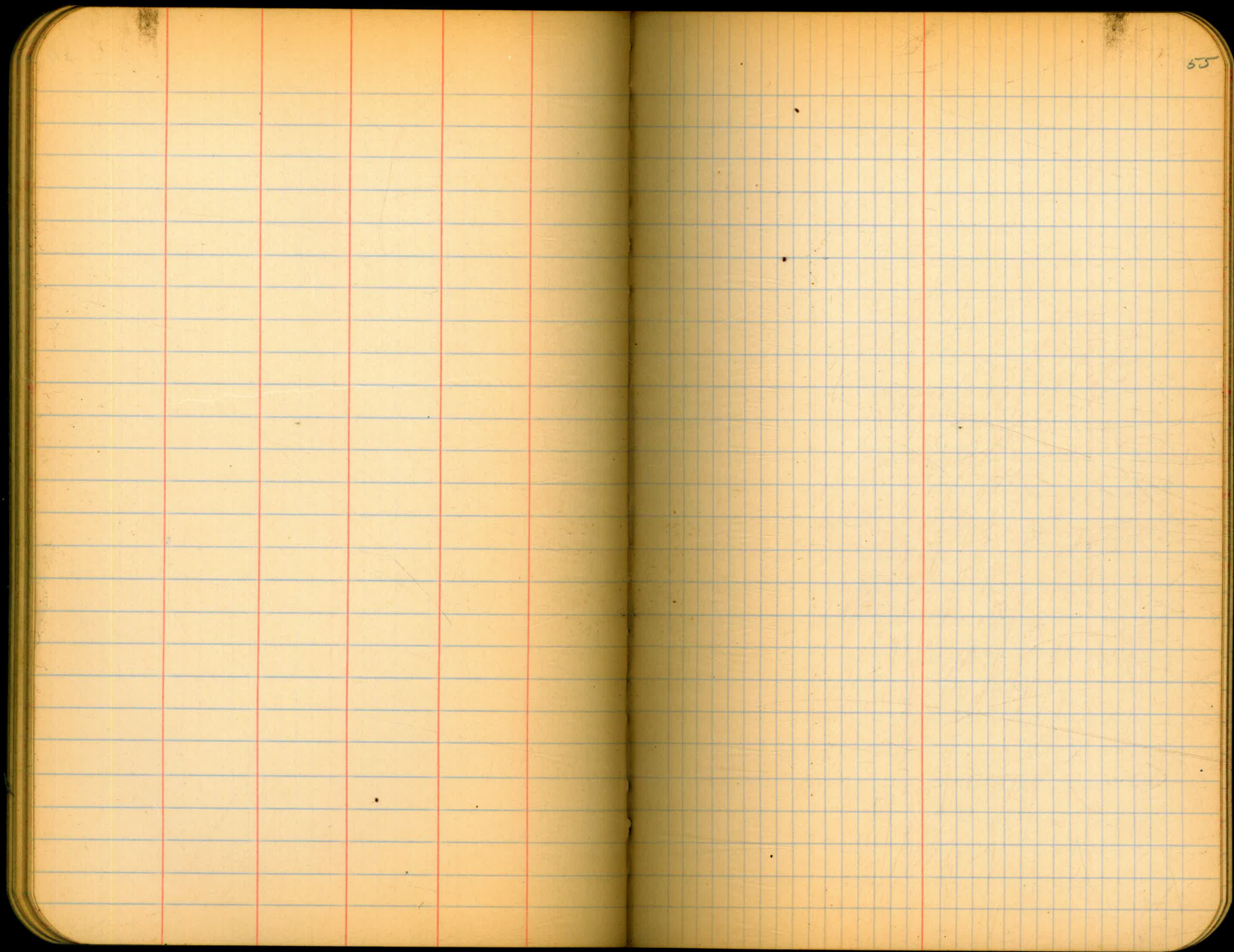
π at 4+40 730.5	131.7 (162)	+25°58'	4.7 4.7	"	El 799.3	
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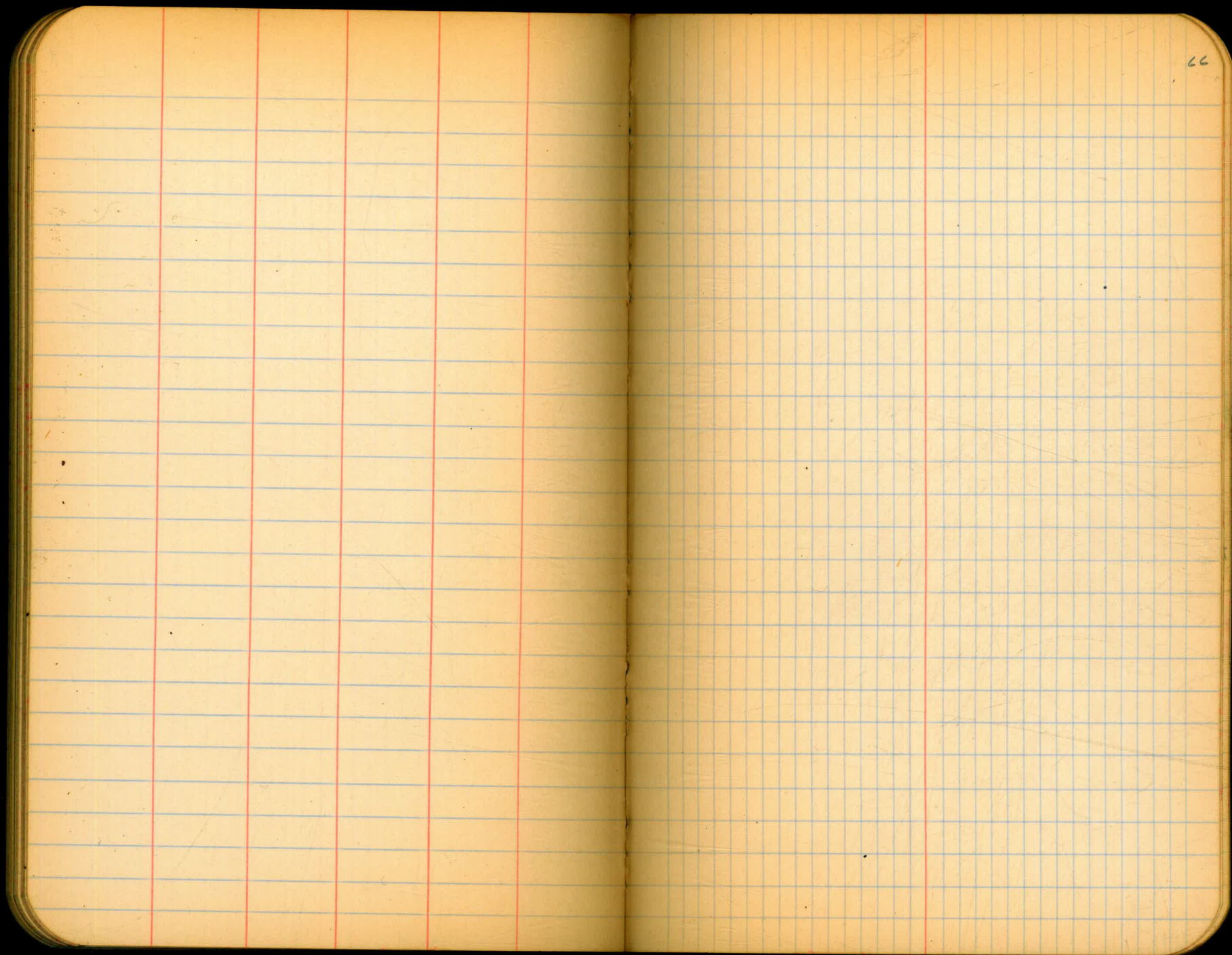
π at 4+80 728.5	124.9 (138)	+18°54'	4.9 4.9	"	El 776.0	
	120.4 (128)	+14°56'	4.9 4.9	81°34' RT (dofl. 1)	El 766.5	Top of wall at edge of slide

π at 6+80 690.0	81.5 (95)	+23°00'	5.0 5.0	90°	El 729.0	
	104.8 (119)	+20°51'	5.0 11.0	"	" 729.5	
	130.7 (151)	+22°00'	5.0 11.0	"	" 742.4	

These shots seem to be about 6' off. ~~11.5~~

11' higher 4' further out = original ground





766 Contour.
EL CAPITAN RES. BASIN

B.M.				756.085
	1.240	757.345	3.130	754.215
	3.615	757.830	4.310	753.520
	4.840	758.360	3.750	754.610
	4.350	758.960	2.700	756.260
	3.750	760.010	3.460	756.350
	4.600	760.950	5.680	755.270
	4.605	759.875	3.415	756.460
	11.550	768.010	10.730	757.280
	4.300	761.580	4.440	757.140
	5.870	763.010	8.590	754.420
	8.245	762.665	4.370	758.295
	5.305	763.600	4.570	759.030
B.M.	4.920	763.950	4.300	759.650
	5.990	765.640	5.840	759.800
	5.330	765.130	4.310	760.820
	8.730	769.550	3.480	766.070
B.M.	11.530	777.600	10.630	766.970
	10.690	777.660	6.930	770.730
	5.310	776.040	10.295	765.745
	5.170	770.915		

March 31, 1932
 J.S.
 F.M.

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On large boulder 200 East of Dam Axis

On old flume level, on fence line west side of creek

At Sta. 83+71 west side of creek on bridge site

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 1/2 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body

from side stake to slope stake. If ground is not

IMPROVED TABLES
AND
INFORMATION

TABLE No. 2.

To find Tangent and External for curve of any other degree, divide by degree of curve and add connection found in column of connections. Degree of curve with a given T may be found by dividing tangent (or external) opposite T by given tangent (or external). The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

1310

135
1175

170

79.0
47.5
31.5

E 5240 N 4630 - 765.2

E 5220 N 4630 - 971.2

290
235
525

26.2

63

10.8
42.9
89.7
27.3
26.3
83.6
26.8

735.1
697.7
37.4

963

817.1
779.0
38.1

65

319
176
495
24.7
26.3
51.0
25.5

38.6
18.9
57.5
26.2

8.5 - 5

83

1310

104
1206

10 61

387
52
439

73.2
28.7
151.9
75.95

264
264
35.8

939.0
264
12.6

900.7
623
278.4

13
11
12
13
133
62.3