

WS25

LEVEL FOOT

WS 42F



525

249408

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  $1\frac{1}{2}$  see inside of back cover.

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Made in U. S. A.

148+52  
211 72  
63+16 50.00  
5  
20  
1  
9  
6







## Equipment ✓

1. Thew Lorain 75-B 1 1/4 yd  
5 1/4 yd Bodies
- 2 GMC 3T Dumps 4 yd Bank Messer  
Trucks # 192
- 1 Chev Flatback Handy Truck
- 1 Cleveland wagon drill Serial No  
5 CV 4651
- 1 60 Cat with bulldozer  
attachment  
(Portable)
- 1 220 cu foot Schramm Buda Engine  
Serial No
- 1 Worthington wagon drill Not Given
- 1 Jack Hammer
- 1 Russel Mogul -12' Blade Grader on  
Hard Rubber tires
- 1 50 Hole Hercules Blasting machine
- 1 Galvanometer

+1.36 ✓

clear-cool  
6:30 am. 5 pm

Shovel benching 231+50. Trucks  
hauling to fill at 228+00 #  
started to lay and weld Air-water line  
To nite Excavation 232+90  
241 loads

Compressor 1-7H - 223+00 on  
rock point.

Cat and blade 1hr clearing road  
cat used to spread fill material



5

4-1-36

1

## Labor - Excav

1	Supt		10	Each
1	Foreman		10	"
2	Shovel operators	e	5	"
4	Truck Drivers	e	5	"
1	Flunky	e	5	
1	Powder man	e	7 1/2	
2	Oiler	e	5	
1	Watchman	e	5	
1	Driller	e	7 1/2	
1	Bulldozer	e	5	
1	Laborer	e	5	
1	"	e	7 1/2	

4-1-36

✓

## Labor - Air-water line

1	Welder	@	6 Hrs
1	Laborer	e	6 hrs

7

4-2-36 ✓

## Equipment

- 1 Shovel
- 2 Trks
- 1 cat
- 1 comp
- 1 Jackhammer
- 2 wagon Drill
- 1 Handy wagon
- 1 Blade Grader

119 Loads rock } No. side of Fill  
 34 .. dirt } Part

✓ Clear  
 6:30 am - 5 pm

## Shovel

- start Excav Sta 232+90 6:30 am
- stop " 233+25 7 am
- start cleanup spot 223+00 7:15 am
- Repair and  
Move 223+00 to 230+00 3:00 to 3:30 pm
- stop 233+65 5 pm

Cat Turn Down - Back in 9:30 am

wagon Drill - start 9 am 230+00 west



4-2-36

## Labor

1	Supt	e	10 hrs Each
1	Foreman	e	10 "
1	Watchman	e	5 "
1	Flunkiey	@	5 "
2	Shovel operators	e	5 "
1	Driller	e	7 1/2 "
1	Powderman	e	7 1/2 "
1	Bulldozer	e	5 "
2	Oilers	e	5 "
4	Truck Drivers	@	5 "
1	Laborer	e	7 1/2 "
1	"	e	5 "

4-2-36

## Air-water Line

1	Welder	@	6
1	Helper	e	6

4-3-36

- 1 Shovel - 1 1/4 yd
- 2 Trucks #1+2
- 1 Cat - 60 Bulldozer attachment
- 1 comp
- 2 wagon Drill - On Trial
- 1 Candy wagon - Chev Flatrock
- 1 Blade - 12'
- 1 J Hammer

Note. All loads 1<sup>st</sup> shift and 14 on  
2<sup>nd</sup> shift from 233+65 to 234+63  
to fill 228+00

4-3-36

6:30 am - 5 pm.

cloudy

Rain 2:30 pm

shovel start 233+65 - Haul to Fill 228+  
stop 234+63

1:30 pm. start at sta. 230+15 grade,  
to take out. 2<sup>nd</sup> lift of bench - 10552

230+15 to 230+40. 21' wide or 3' deep  
58 yds. cast east to fill

stop 230+80

Loads Heaps 55 } 1<sup>st</sup> shift

Horton 58.

McMullin } 7 From 230+15 to Top Fill.

Pattern } 7 From 230+15 to Top Fill.

181

Camp and working too drill at 224+75

Camp #1 JH to 232+75 2 PM. Boulder

All Excavation DG

no welders today

Load 3" pipe out at noon

2:30 pm. Rain



13, 4-3-36 Labor

## Labor

0	Super		
1	Foreman	@	10 Each
1	Watchman	@	5
1	FlunkKey	@	5
1	Driller	@	5
2	Shovel Operators	@	5 Each
1	Powderman	@	8 "
2	Oilers	@	5
1	Bulldozer Operator	@	5
2	Laborers	@	5
2	Truck Drivers	@	4
2	"	@	5

4-4-36

## Labor

1	Foreman	@	10 Hr each
1	Watchman	@	5
1	FlunkKey	@	5
2	Shovel Operators	@	5
1	Driller	@	5
1	Bulldozer	@	5
1	Oiler	@	3
1	"	@	5
2	Truck Driven	@	3
2	"	@	5
1	Laborer	@	2
1	"	@	4

15 4-4-36

- 1 Shovel
- 2 Trucks 142
- 1 Cat 60 Bulldozer
- 1 Comp. 260 cu foot
- 2 Wagon Drills - on Trial
- 1 Candy Wagon
- 1 12' Blade
- 1 Jack Hammer

Drillers start 16255

Travel down 7<sup>th</sup> am. Latch Trip start 9<sup>45</sup>

J.W. Williams on job PM

Casper on job PM

4-4-36

6<sup>30</sup> am - 5 PM

Rainy

start 230+80

clear

9<sup>45</sup> 230+87. 10 loads

9<sup>45</sup> dump 228+45

7 loads on Fill Extension 2nd

12<sup>15</sup> 231+20 9 am 2d Fill 16 loads shift

1<sup>30</sup> pm Shovel to 230+50 taking out south

side of cut Dump 228±

Ramped out 231+00 to 231+50

ALL Excav. DG

160 loads - Total



17

4-6-36 Monday ✓

## Equipment

1. Shovel
- 2 Trucks 1st shift
- 1 - 60 Bulldozer
- 1 Candy Wagon
- 1 - 260 cu ft Compressor
- 1 - Cleveland Wagon Drill
- 4 Trucks 2nd shift #1-2-04-36

Trucks 1st e 3.5 yds

# 04 e 4.43 cu yds

# 36 e 4.42 cu yds

Drill 234+00

10<sup>00</sup>

258+50

4-6-36

6:30 am - 5 pm

Clear-in-arm

6:30 8:30 shovel building ramp on west end - sta 234+63 - cast.

Trucks 1st

49 loads 1st shift 44 to fill 5 to ramp

Fill { 2 55+25 to 2 53+83 1st shift  
2 53+83 to 2 52+50 2nd shift

Material DG and Topsoil

Excavation End 234+75

Trucks 1st 84 loads - 2 shifts 46 yds

Truck 04 18 loads 79.74 "

36 18 " 79.56 "

19

4-6-36 ✓

## Labor

1	Foreman	@	10	Each
1	Watchman	@	5	"
1	Flunkey	@	5	"
2	Shovel operators	@	5	"
1	Driller	@	5 <sup>1/2</sup>	
1	Powerman	@	5	
1	Bulldozer	@	5	
2	Oilers	@	5	
4	Truck Driver	@	5	
2	"	@	3	
1	"	@	1	
1	Laborer	@	5	
1	"	@	8	

4-6-36

## Notes

J.W. here 9<sup>15</sup> am

Load water pipe 258+00

10<sup>05</sup> am

Drill to 258+25

10<sup>45</sup> am

Mr Hyatt here

11 am

J.W. here

12<sup>15</sup> am

Truck #36 poor hoist

#04 down - 3<sup>15</sup> - 3<sup>45</sup> Gas pump

Casper here

3<sup>15</sup> pm

Dennis here

4<sup>15</sup> pm



4-7-36 /

Equipment

- 1 Power shovel
- 4 Trucks - 1-2- 64- 53
- 1 60 Cat Bulldozer
- 1 260. Comp
- 1 Wagon Drill
- 1 Jackhammer
- 1 Candy wagon
- 1 Grader

4-7-36

6:30am - 5pm  
clear warm

Operations

6:30am Shovel moves to 231+50 work west  
 12m. " " " 234+63 " East  
 5pm " " " 233+25 " " End

Material D.G.

7:15am Camp + wagon Drill to 234+50

Fill to 249+17 tonite

4-7-36 ✓

## Labor

1	Supt	e	10 Hrs Each
1	Foreman	e	10 "
1	Watchman	e	5 "
1	Flankey	@	5 "
1	Driller	e	5 "
2	Shovel Operator	e	5 "
1	Powderman	@	5 "
2	Oilers	e	5 "
1	Bulldozer Operator	@	5 "
2	Laborer	e	5 "
6	Truck Drivers	e	5 "
2	"	e	1 "

Started 7 Trucks at 6<sup>30</sup> laid off driven

7<sup>30</sup> am

4-7-36 ✓

## Notes

J.V. Williams Here	8 <sup>15</sup> am
J.V.W	11 <sup>30</sup> pm
Carpenter	2 <sup>15</sup> pm
J.V.W	3 <sup>30</sup> pm

Started on X sec. of bench ramp seven

Fill at 250+00 at start for load count

Loads #1 10

#2 9

#53 8

#04 11

deduct these loads from  
total balance in  
measured section

## Total loads

#53 14 loads #04 - 3 loads - 1<sup>st</sup>

#1 122 loads<sup>2nd</sup> #53 17 loads<sup>1</sup>

#1 18 " " #21 19 "

#04 20 " " #21 25 " 2nd



25

4-8-36 ✓

## Equipment

- 1 Power Shovel
- 1 Tractor 1-2-04-26
- 1 60 Cat Bulldozer
- 1 260 Comp
- 1 Wagon Drill
- 1 J Hammer
- 1 Candy Wagon
- 1 12' Grader

Loads 1<sup>st</sup> Shift

#1	27	#04	26
#2	25	#53	9
#36	12		

2<sup>nd</sup> Shift

#1	24-	#04	- 24
#2	15	#53	- 22

11 25  
11 25  
11 25

✓ 4-8-36

Shift 6<sup>30</sup> am 5pm  
Clear Warm

## Operations

- 6<sup>30</sup> am Shovel at 233+50 So side
- 2<sup>30</sup> pm Ramp out 232+12 So side
- 2<sup>30</sup> start north side 233+50 No side
- 5pm Ramp out 232+35 No side
- 5pm Fill 245+24 End
- 7<sup>00</sup> am Drilling 233+25 So side East

27

4-8-36

## Labor

1	Supt	e	10 Hr Each
1	Foreman	e	10 " "
1	Watchman	e	5 " "
1	Flinkey	e	5 " "
2	Driller	e	5
2	Shovel Operator	e	5
1	Powerman	e	5
2	Oilers	e	5
1	Bulldozer	e	5
8	Truck Driver	e	5
2	Laboren	e	5

4-8-36

## Notes

F.O.P. Here

7<sup>45</sup>am

J.W.V. FDP

9<sup>25</sup>am

Casper

12<sup>40</sup>pm

Dennis

2<sup>45</sup>pm

McMillan Scraper in

3<sup>30</sup>pm

J.W.V.

4<sup>30</sup>pm#36 Down 9<sup>45</sup>am Start #53



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### Equipment

- 1 Shovel
- 4 Trucks 1-2-3 4-53
- 1 60 Cat Bulldozer
- 1 260 Compressor
- 1 Wagon Drill
- 1 Jack Hammer
- 1 Candy Wagon
- 1 12' Grader

### Trucks - Loads - 1st shift

#04	24	} These are pay quantities to fill. Fill end 242+73 <sup>5</sup>
#2	24	
#1	23	
#53	24	

### 2nd shift

#1	53 loads	} This material was contractor option and was hauled to fill 228+10 <sup>5</sup>
#2	43 loads	

149-36 6:30 am - 5 pm  
Clear - Warm

### Operations

- 6<sup>30</sup> am Shovel start 232+35 no. side
- 6<sup>30</sup> am Fill starts 245+24
- 11<sup>30</sup> am Fill completed
- 3<sup>10</sup> PM North cut thru
- 4<sup>45</sup> pm Cable on shovel brake
- 4<sup>45</sup> 232+00 so side

Driller 158+50 & 161+00

Loads - end of 1st shift is end of loads in measured section - see sketch in back of book

4-9-36 ✓

## Labor

1	Super	@	10 Hr	Each
1	Foreman	@	10 Hr	Each
1	Watchman	@	5	"
1	Flunkey	@	5	"
1	Driller	@	5	"
2	Shovel Operators	@	5	"
1	Powderman	@	5	"
2	Oiler	@	5	"
1	Buildozer	@	5	"
5	TRUCK DRIVERS	@	5	"
2	Laborer	@	5	"

1	welder	@	5	"
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Water Line for construction purposes

## Notes

Truck Here

9<sup>30</sup> am

Casper

10<sup>40</sup> am

Casper

11<sup>30</sup> pm

Tr. W

1<sup>45</sup> pm



4-10-36 ✓

## Equipment

- 1 Power shovel
- 2 Trucks 142
- 1 60 Cat Bulldozer
- 1 Candy wagon
- 1 Wagon Drill
- 1 260' Compressor
- 1 12' Grader
- ~~Idle on job~~
- 1 Jack Hammer
- 1 Truck 04
- 1 - 60 cat
- 1 - McMillan Am. Tractor Equip Co.

Model 5-10

Serial No 418

## McMillan 2nd shift

2nd shift #1 <sup>10 rock</sup> 6 dirt 225 to 228+00  
 #2 <sup>10 rock</sup> 6 dirt 225 to 228+00

All contractor dirt

4-10-36

6<sup>30</sup>am 5pm  
clear warm

## Operations

- 6<sup>30</sup>am Shovel 232+00 30 side work East
- Dump 228+00 ±
- 8<sup>00</sup>am Driller 157+80 soil
- 8<sup>30</sup>am Shovel to 230+85 50 side work East
- Dump 222+30 - working East to 219+10
- 10<sup>00</sup>am Driller 177+75
- 1 PM. Cut complete moved to  
No Trucks - cost  
234+65 to cut thru bank on line
- 3pm Shovel to point 225+00
- Dump 228+00 ± No side
- 4 PM Powderman loading 162+00 ±
- 4<sup>20</sup>  
4<sup>30</sup> shovel down - No Gas
- #1 6 loads to 230+85 } along 50 side  
#2 6 " " " " } Fill
- Loads #1 33 to 222+30 24 to 228+00
- #04 10 to 222+30
- #2 23 to 228+00
- #2 19 to 222+30

4-10-36 ✓

## Labor

1	Supt		10 Hrs Each
1	Foreman	e	10 Hrs Each
1	Watchman	e	5 .. "
1	Flunkay	e	5 .. "
2	Shovel Operator	e	5 .. "
1	Welder	e	5 .. "
1	Driller	e	5 .. "
1	Poriderman	e	5 .. "
1	Bulldozer Operator	e	5 .. "
2	oilers	e	5 .. "
2	Truck Driver	e	5 .. "
2	" .. "	e	3 .. "
2	Laborer	e	5 .. "

## Notes

J.W.V

7<sup>40</sup> am

J.W.V

12 "

Casper

12<sup>45</sup> pm

J.W.V - "off Project" order

2<sup>45</sup> pm



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4-11-36

## Equipment ✓

- 1 Power Shovel
- 2 Trucks #142
- 1 60 Cat Bulldozer
- 1 60 Cat - M<sup>o</sup> Millan
- 1 260 Comp
- 1 Wagon Drill
- 1 JH
- 1 Candy wagon
- 1 12' Blade Grader
- 1 Truck - #04 - standby

4-11-36

6<sup>30</sup>am - 5pm ✓  
Clear warm

## Operations

- 6<sup>30</sup>am Shovel at 225 - works East
- 8<sup>30</sup>am " " 22400 - west  
contractor
- Dump No. side 22800 Dirt
- 11<sup>30</sup> Down mo shovel shift  
in pm. wait to shoot
- 12<sup>M</sup> shot sta 161+75.
- 2<sup>30</sup>pm Cat 60 to district. to build  
construction road to tunnel
- loads - #1 - 28 dirt and rock
- " #2 27 " " "
- loading 161+75
- PM Drill 22400 22600 point

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## Labor ✓

1	Supt	@	10 Hrs Each
1	Foreman	e	10 ..
1	Watchman	e	5 ..
1	Flunkey	e	5 ..
1	Shovel Operator	e	5 ..
1	Welder	e	5 ..
1	Powderman	e	5 ..
1	Bulldozer Operator	e	5 ..
2	Oiler	e	5 ..
2	Truck Drivers	e	5 ..
1	Laborer	e	5 ..

4-11-36

## Notes ✓

J.W.V	11:00
Casper	12 M
J.W.V	2:00 4pm
FOP	2:00 3:30 pm
Paul B	2:00 3:30 pm



4-13-13 ✓

Equipment:

- 1 Power Shovel
- 2 Trucks #142
- 1 60' Cat Bulldozer
- 1 260' Comp
- 1 Wagon - Drill
- 1 Jackhammer
- 1 Candy Wagon
- 1 12' Blade Grader
- 1 Truck #04 Standby

4-13-13

6<sup>30</sup>am 5pm  
Foggy. cooloperations

6<sup>30</sup>am shovel moves 225+00 to 263+50  
 7<sup>30</sup>am shovel starts 263+50 no side work East  
 Trucks 1+2 haul to Fill 255+39 Dump west

9<sup>40</sup>am Bulldozer in from dam

1<sup>pm</sup> Raise grade 1' - 261+50 to 261+00  
 Carry 1' high to 260+50 then to 0.50  
 high at 260+00, then to staked grade  
 at 259+50 work authorized

3<sup>15</sup>pm Shovel under repair almost  
 all of second shift until  
 now

5pm shovel 260+15

shovel and Bulldozer both  
 under repair in pm

This ground has been shot from 260+00 East

Bulldozer clear road 225+

Drillers 225+00 - shot 11<sup>40</sup>am

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## Labor ✓

1	Foreman	e	10	Hroad
1	Driller	e	4	
2	Shovel operator	e	5	
1	Powderman	e	5	
1	Oiler	e	8	
1	Oiler	e	5	
2 <sup>nd</sup> shift	Truck Driver	e	3 1/2	
1 <sup>st</sup> shift	" "	e	3 1/2	
2	Laborer	e	5	
1	Watchman	e	5	
1	Flankey	e	5	

4-13-36

## Notes ✓

J.W.V.	8 am
Hyatt	8 am
J.W.V.	11 <sup>40</sup> am
Casper	11 <sup>50</sup> am
J.W.V.	1 PM
Casper	1 pm
Trav Mech	1 pm to 4 pm
J.W.V.	4 <sup>30</sup> pm

Loads 1<sup>st</sup> shift #2-23 #1-26 ✓  
to bench fill

	#2	#1	
2 <sup>nd</sup> shift	17 part-fill	18	part-fill
4 <sup>pm</sup>	Contractors dirt	9	waste
		8	waste
	Total, shift	26	



4-14-36 ✓

## Equipment

- 1 Power shovel
- 2 Trucks - 142
- 1 60 cat Bulldozer
- 1 260 Comp
- 1 Wagon Drill
- 1 Jackhammer
- 1 Candy wagon
- 1 12 Blade Grader
- 1 Truck #04 standby

4-14-36 ✓ 6:30 am - 5 pm  
#994 - clear 8:30 am

## Operations

- 6:30 am shovel start 260+15 No side-work East, haul to 30 side fill, 258+50 East Contractor Dirt - all today's.
- 7:10 am shovel down, cable parted
- 10:00 am cutting out of limick #1-27/000 #2-23/000
- 11:00 am start west, 50 side
- 12:15 259+50 going west side
- Service man here on cat and truck about 6 hours
- 3 pm Finish cut on 50 side 261+80 Shovel moves out to
- shovel to 225+00 # Dump 228+00
- 4:15 pm

1st shift #2 - 30/000 Contractor's dirt  
to 50 side of bench fill } 258+00

2nd shift #1 - 13  
#2 - 13  
#1 - 4 225+00 to 228+00  
#2 - 5 " " "

Driller sta 167+50  
shot 158+00 F

47 4-14-36 ✓

## Labor

Quantity	Job Title	Rate	Hours	Notes
1	Foreman	e	10 Hr Each	JNW
1	Driller	e	7 "	JNW
2	Shovel Operator	e	5 "	FDP THRU
1	Powderman	e	4 "	Casper
1	Oiler	e	8 "	JNW
1	Oiler	e	5 "	FDP
2	Truck Driver	e	4 "	
2		e	5 "	
1	Laborer	@	5 "	
1	Watchman	e	5 "	
1	Flunkiey	e	5 "	

4-14-36 ✓

## Notes

7<sup>15</sup> am12<sup>00</sup>2<sup>15</sup> pm4<sup>00</sup> am4<sup>45</sup> pm4<sup>50</sup> pm

.04 out at noon

Bulldozer to Hodge 5 pm

Air Equipment to beyond 10400 pm

Note: P.M. the shovel was skimming

So. side of cut, old road and

loads were light. Trucks were

governed to some extent by

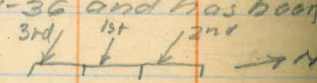
traffic and shovel movement



49 4-15-36

Equipment

- 1 Power Shovel
- 2 Tracks #117
- 1 Grader
- 1 Candy wagon

Today's work at 160+75-162+60 is  
 in material shot 4-11-36 and has been  
 handled in 3 cuts 

4-15-36

6:30 am - 5 pm  
Misty  
10 am clear

Operations

- 6:28 am Shovel at 225+00+ working east  
cleaning up rock shot Dump
- No side Fill 228+00+
- 7<sup>th</sup> am 9:00 Shovel moves 225+00 to 160+75 so side  
works west Dump 155+50 so side
- 12M Shovel at 161+50 Dump 154+40
- 3<sup>35</sup> pm 160+75 No side Dump 152+60
- 4<sup>40</sup> pm Shovel to 162+60, works East
- 5 pm Fill 152+18
- 5<sup>45</sup> pm Shovel 161+40

10 am shoot 167+00 T

11<sup>30</sup> am shoot 177+00 T

## Labor

1	Foreman	@	10	Mo	Each
2	Shovel Operator	e	5	"	"
1	Paydorman	e	5	"	"
1	Oiler	e	5	"	"
2	Truck Driver	e	5	"	"
2	"	e	3 1/2	"	"
1	Watchman	e	5	"	"
1	Flunkey	e	5	"	"

## Notes

J.W.V.

7:30 am

Casper

1:30 pm

Hyatt

3 pm

Load up form lumber to district

job - 8:00 am

Load 1st shift

#1	#2	From
5	4	225400
		165475
<u>19</u>	<u>14</u>	290875
Total		
	24	18
2nd shift	<u>40</u>	<u>39</u>
	64	57



4-16-36 ✓

## Equipment

- 1 Power Shovel
- 2 Tracks #142
- 1 12' Grader
- 1 Candy Wagon

4-16-36 ✓

6<sup>30</sup>am 5pm  
Clear - warm

## Operations

- 6<sup>30</sup>am Shovel at 159+40 casting Trucks
- idle
- 8<sup>15</sup>am Start Truck haul. Dump at 152+18
- shovel at 159+60. Clay & DG
- 11am shovel at 160+75 dump 150+70
- 1<sup>10</sup>pm Shovel down. Going 1<sup>25</sup>pm
- 5pm shovel 161+20
- 5pm Fill 148+00

1 <sup>st</sup> Shift	{	#1	#2	@ 5.5	} contractor
		31	33	@ 5.5	
2 <sup>nd</sup> Shift	{	40	40	@ 5.5	} .. ..
		71	73		

## Labor

1	Foreman	©	10 hrs	East
2	Shovel operator	©	5	"
1	Oilor	©	5	"
2	Truck Driver	©	5	"
2	"	©	4	"
1	Labaret	©	5	"
1	Watchman	©	5	"
1	Flunkey	©	5	"

## Notes

1 pm

45  
1 pm



4-17-36

## Equipment

1 Power Shovel

3 Trucks #04-#1#2 <sup>7<sup>30</sup> AM</sup>

1 Candy Wagon

1 12' Blade Grader

1 60 cat McMillan

Loads	04	1	2	36	05
1st Shift	37	16	31	20	
			4 work		
2 <sup>nd</sup> Shift	35	0	50 Fill	7	1
	72	14	85		
			12 <sup>30</sup> + 10 <sup>30</sup> westward		

Note The fill of 145+50 is being made

so very much over grade that it will have to be paid for from & sec to staked dimensions

4-17-36

6<sup>30</sup> am 5<sup>00</sup> pm  
Foggy misty - Cool  
Clear 8<sup>30</sup> am

## Operations

6<sup>30</sup> am shovel at 161+20 Sabonk works west6<sup>30</sup> am Fill at 198+007<sup>30</sup> am start truck #29<sup>am</sup> Truck #1 - down. Broken frame9<sup>15</sup> am Cat and McMillan leveling dump11<sup>30</sup> am Shovel 161+5012<sup>am</sup> start Dump sta 154+00 2<sup>nd</sup> lift.12<sup>am</sup> trucks 04-36 to waste 154+00

#2 To Fill 163+08 westward

1<sup>45</sup> pm #36 down - went to plant2<sup>00</sup> pm #2 Down - Bolt rear wheel lock<sup>25</sup>3<sup>45</sup> all trucks down 3<sup>50</sup> pm3<sup>20</sup> pm 05 on to job5<sup>pm</sup> Dump 152+205<sup>pm</sup> shovel 161+755<sup>pm</sup> Fill end 144+15

## Labor

1	Foreman	e	10 hrs East
2	Shovel Operator	e	5 "
1	Oiler	e	5 "
2	Coal-Millmen	e	5 "
3	Truck Driver	e	5 "
1	"	e	4 <sup>1</sup> / <sub>2</sub>
1	"	e	8
1	Laborer	e	5
1	Watchman	e	5
1	Flunkey	e	5

## Notes

J.W.W

8<sup>00</sup><sub>00</sub>

Caspers

11<sup>00</sup><sub>00</sub>

Compressor to tunnel

10<sup>45</sup><sub>00</sub>

Hyatt

3<sup>15</sup><sub>00</sub>

J.W.W

4<sup>30</sup><sub>00</sub>



4-18-36 Saturday ✓

## Equipment

- 1 Power shovel
- 3 Trucks #1-2-04
- 1 Candy wagon
- 1 Go cat + McMillan

TRUCK#	#1	#2	#04		
1st Shift	40	40	40	↑ 7000 10000 east from 16300	All waste
2nd	15 waste 7	(30 Fill) 10 waste 7	25 waste 7		All waste
	72	87	77		Fill 172+15

4-18-36

6:30 am 5pm

Foggy cool.

## Operations

- 6:30 am Shovel at 167+75.30 side, work west
- 6:30 am Dumping 145+50 + 152+20
- 7:15 am change shovel tooth ok 7:45 am
- 12:12 shovel 162+22.30 BANK WORKS WEST
- 12:12 Dump 148+00. 2<sup>nd</sup> lift
- 12:45 Truck # 2 ON FILL 164+15 westward
- 1:00 start Dumping No side waste dump. 1.04
- 3:15 pm Finish 163+00 move to 167+75
- 3:45 Fill 172+15 Westward
- 5 pm Fill 172+90
- 5 PM shovel 167+35

## Labor

1	Foreman	e	10 Hrs Each
2	Shovel operators	e	5 "
1	Diller	e	5 "
2	Coal men	e	5 "
3	Truck Drivers	e	5 "
1	Truck Driver	e	7
1		e	8
1	Laborer	e	5
1	Watchman	e	5
1	Flankey	e	5

## Notes

J.W.W.

Dennis

Hyatt Shropshire

Casper

J.W.W.

1145

7<sup>30</sup>am7<sup>45</sup>am9<sup>30</sup>am11<sup>45</sup>am

3pm



65

Monday 4-20-36

## Equipment

- 1 Power Shovel  
 3 Trucks #1-2-3-4  
 1 Candy Wagon  
 1 12" Blade Grader

Note - #04-3 #1-3 4#2-3 loads waste on S.

Side of fill 172+90 to 173+75

	#04	#2	#1
1st shift	27 17	33	46
2nd shift	32 71	29 62	36 82

1 4-20-36

6:30 am 5 pm  
High Fog - warm

## Operations

- 6:30 am Shovel at 167+35 works Eastward  
 6:30 am Fill at 172+90 works Westward  
 8:00 am Truck #2 in at 8:00 am  
 8:30 am start wasting on side of fill  
 12:15 shovel 166+12  
 12:15 Fill complete to 173+75 from east end  
 12:15 Fill, 1 row, 170, side 174+00 to 176+20  
 12:30 pm Shovel finish 165+50 move to 179+50  
 12:30 Dump at 173+75. S side - East end  
 3 loads each truck waste  
 1:35 shovel starts 179+50 No side work East  
 1:35 fill 179+75 work Westward  
 5 pm Fill at 182+20  
 5 pm shovel stop 176+90

67

4-20-36

✓

## Labor

1	Foreman	e	10 hrs	Each
2	Shovel Operator	e	5	
1	Quill	e	5	
2	Truck Driver	e	5 1/2	
1		e	8	
2		e	5	
1	Laborer	e	5	
1	Watchman	e	5	
1	Flunkey	e	5	

4-20-36

1

## Notes

J.W. VY

9<sup>15</sup>am

Hyatt

9<sup>55</sup>am

Caspars

3<sup>05</sup>pm

1 6 wheel loader of 1 1/2' rock

1 " " " 3/4" rock



4-21-36

## Equipment

- 1 Power Shovel
- 3 Trucks #1-2-04
- 1 Candy Wagon
- 1 12' Blade Grader

## Loads

	#1	#2	#04	
9 <sup>30</sup> am	22 <sup>F</sup>	18 <sup>F</sup>	15 <sup>F</sup>	Fill End 183+50
2nd shift	MC 13 <sup>F</sup>	MC 16 <sup>F</sup>		
	11 <sup>F</sup>	11 <sup>F</sup>	25 <sup>N</sup>	16 R. PM
		16 <sup>F</sup>		
	130 Waste 21 Waste			
	76	56	56	

4-21-36

6<sup>30</sup> am - 5 pm

## Operations

- 6<sup>30</sup> am Shovel at 176+90 No side works East
- 6<sup>30</sup> am Fill at 182+20 works west
- 7<sup>35</sup> am Trucks start side dumping over bank
- at station 179+50
- Fill end 183+50
- 9<sup>30</sup> am Shovel 176+25 So Bank works west
- 9<sup>30</sup> am Trucks Dump Fill 175+50 <sup>work</sup> East
- Today's waste was on so side of
- fill 174+00 F
- 5 pm Shovel 178+80 So side

71

4-21-36

## Labor

1	Foreman	e	10 Hrs Each
2	Shovel Operators	e	5 " "
1	Oiler	e	5
3	Truck Driver	e	5
1	"	e	7
1	"	e	8
1	Labarer	e	5
1	Watchman	e	5
1	Flunk Key	e	5

4-21-36

## Notes

J.W.R.

6-wheeler of sand

Caspers

6-wheeler Pea crushed

" " rock

Dennis

7<sup>30</sup> am

10 am

11 am

12<sup>35</sup> pm12<sup>45</sup>2<sup>40</sup> pm

4 pm



73

4-22-36

## Equipment

- 1 Power shovel  
 2 Trucks 142  
 1 Candy wagon  
 1 12' Blade grader

## Loads

#2	1
180+50	1 waste
29-Fill	18+50
	30-Fill

211	8F	7F
	34W	25
	<hr/>	<hr/>
	71	62

Wed 4-22-36

6<sup>30</sup> - 5pm  
Clear-vvorn

## Operations

- 6<sup>30</sup>am shovel starts 178+80 so side - works west  
 6<sup>40</sup>am Fill dump over bank 180+50  
 10<sup>00</sup>am Finish 178+80 Move to 157+50 F  
 waste 152+25 westward  
 Fill 151 loads 159+00 F  
 3<sup>40</sup>pm out to dam

## Labor

1	Foreman	€	10hr	Each
2	Shovel Operator	€	5	"
1	Oilier	€	5	"
2	Truck Driver	€	5	"
2		€	4	"
1	Laborer	€	5	"
1	Watchman	€	5	"
1	Flunkie	€	5	"

## Notes

Terry

Hyatt

Casper

12:30

7:15 am

1:45 pm

3 pm



77

6-22

1-welder 5 Hr Air Line





	22 <sup>nd</sup>	23 <sup>rd</sup>	24 <sup>th</sup>	25 <sup>th</sup>	26 <sup>th</sup>	27 <sup>th</sup>	
Darling - Foreman					5	10	Trench
Webb - Hoop Opt					4	8	Trench
Deputy - Welder	5	-	8	2	2	2	Air Line
Redwine - Bidgr				5	5	5	Class I
Bontan " "				5	5	5	Class I
Anderson Driller					3		Trench
Wilkinson " "					7	3	Trench
Tonnings Laborer				5			Road
Neal " "	5						Road
Price " "	5						Road
Webb " "				5	8	8	Trench
Hult Oiler					4	2	Trench
Hale Water	5	5	5	5	5	5	
Anderson Powder						2	Trench
Sovain - Driller						7	Trench

102+80 104+46 105+75  
104+46 105+75 107+50

6-29-36

1-Foreman-	Darling	10	602
1-Hooper	Webb	6	110
1-Driller	Wickora	6	87½
1-Bulldozer Op	Redwine	7	75
1-Officer	Hull	4	75
1-Powderman	Andy	6	75
1-Laborer	Webb	6	62½
1-Watchman	Hale	5	50

6-29-36

Trench

Class I Trench 107+50 to 110+50  
 Wagon Drill at Cape Horn  
 Bulldozer level 180+00 F

Hoe-Wagon Drill  
 J.H. Bulldozer Sta. Camp



6-30-36

1- Foreman - Darling	10
1- Hoe Operator	6
1- Oiler - Haut	5
1- Laborer - Webb	5
1- Driller - Wikoren	5
1- <sup>Driller</sup> Powderman - Anderson	5
1- welder	8
2- Bulldozer c c	5
1- watchman	5

6-30-36

Hoe - 110+50 to 114+00  
 wagon Drill at Cape Horn  
 welder and helper on air line  
 and water line repair

Labor

1-Foreman e 10  
1-Hoe Optr e 4  
1-Welder e 2  
5 drillers  
1-Bulldozer e 3 105  
1-Oiler e 5 - Hullt  
1-Powderman e 5  
2-Labaree e 5  
1-Watchman e 7

7-1-36

Hoe 114400 to 116150  
Bulldozer level spoil bank



7-2

1-Weider 412

2-Bulldozer C5

1-Lab @ 412

1-watchman CJ-

Bulldozer on road

Hoe Idka

7-3

1-welder e 5<sup>1</sup>/<sub>2</sub>

1-Bulldozer e 5 108

1-Watchman e 5

7-3

Bulldozer on road - 5 pail bank

Hot Idls



9-11-36

Primer OK at 113+68 1<sup>05</sup> PM

9-11-36

12-2-24  
8-9-16  
3hr

Wrapping

wrapped 107+69

Told Meyer to have  
bottoms sealed better

9 14 36

wrapping

108+89 OK 12 M.

111+58 OK 2 PM

wrapped to 113+38 2 PM

Epoxyed to 115+16

Primed 122+63



9-15

11950 23977

wrapped to 124150

Enameled to 127170

Primed to 134156

9-16-38

Wrapped 135+46

Wrapping accepted 131+90

Enamelled 138+43

Primed 148+60



9-17-36

wrapped to 14472

accepted to 13546

Inspected and marked to 14262

Enamelled to 14860

Primed to 15885

9-18-36

wrapped to 15010

accepted to 14886

Inspected and marked to 14912

Enamelled To 15340

Primed to 15962

9-21-36

110m

wrapping crew to tunnel

9-21-36

12m

wrapped to 152+80

accepted to 152+80

Enamelled to 154+30



9-22-36  
Backfill

Mr. Sewell

Mr. Kinney

Garrett

Andrew. Wm Benthall 4216 Polace St SD 0470-639

✓ Ross Davis - 3968 Oregon 0470-33826 SD

John T. Ivonek. 1332-K. 0470-9614 SD

✓ Lewis. Ruel Owens Comp Ware 0470-30975

✓ Edward E Muse 3721 Myrtle Ave 0470-32756

Walker - clam apt

Hult - Aitor

clam stack pile beautiful material

Clarence M. Dixon - 4059-39 SD 0470-19559

Ballhole Backfill 108+29

Final Backfill 105+40

Wrapping 9-22-36

Wrapped 158+86 ok except below

Enameled to 159+62

154+60 & 154+90 Not wrapped - Pump

9-23-36

Backfill ✓

Reeder - TRK DR

Watkins - opt'r Gulf Oiler

Swain - Dixon - Russel - Muse

Bentall - Ivencik - Davis

Lopez - McKinney - catskinners <sup>start</sup> 1pm

Sniff - opt'r Wolf Oiler PM

McKinney

Gravette

Frazette

Dent

Benton

9-23-36

Backfill ✓

Crane - stack Backfill material

1 - Dump TRK haul " " "

Backfill bell holes to 110+00

2 - Cats start 1pm - Backfill

Backfill bell holes 117+85 to 119+04

Final Backfill 107+00 - 109+25

Cat and clam stackpile to <sup>117+85</sup> 139+02

wrapping air to valve box  
except as noted depart



9-24-36

9-24-36

Amer. clam stocking backfill.

material + 152.50

1-cat. stacking

1-cat final backfill 107+00 + 106+25

Backfill bell holes 119+04 - 124+70

MAJIN  
Told Burton that if the machines  
while stock piling could not keep  
material from running into bell holes  
we would stop machine work  
5/2149412

wrapped 170+27

OK 165+20

9-25-36

Patch crossing shore score 217

Rocky Point

wrap to 188+13 Jump to 190+83 to 192+03

OK to 174+14

ckd to 177+13

9-25-36 ✓

clam - get back fill materials

1- cut final back fill

1- cut levels & final backfill

2- Dump Trucks haul from

clam

11<sup>00</sup> 2 Trucks from below out 1pm

Bellholes 110+00 to 115+00

Final back fill 109+25 - 115+00

Puddle backfill 109+50 - 112+50

Bellholes 116+50 - 117+85

Final backfill 116+50 - 117+85



9-26-36

✓

Crane backfill - Final

1-Cat Backfill Final

1-Cat Backfill - Burton

Final backfill 12-47 50

Bell hole backfill 130+70

9-28-36

Wrapped to 183+95 3pm

Wrapping ok 181+88

9-28-36

✓

1- Clam Backfill - Final

1- Bulldozer Level Backfill

1- . . . under repair

Final backfill cargo to 130+50 <sup>am</sup>

Bell hole backfill 137+85

Flooded for final backfill 136+50

Final Backfill 130+70 - 137+00

38 17



Wrapped 196 + 20 2<sup>25</sup> form  
accepted 196 + 20

182+68 Paper DAM OK  
186+95 " " " OK  
192+63 " " " OK  
194+43 OK 1<sup>20</sup> form

9-29-36 v

1-Clam Final Backfill  
2-Cats + Backfill and Level

Final Backfill 137+00  
Berthole backfill 137+85 to 142+32  
142+92 144+40

9-30-36

Wrapped to 211+72  
accepted to 203+40  
checked to 209+92

198+60 Patch - 30 side bank OK  
201+90? " " " " OK  
202+20? " " " " OK  
203+40?  
203+70 Tur No Side

9-30-36 ✓

crane not working  
2 Cats backfill and level  
start Bell hole backfill 144+40  
to 148+56 and fill East of 160+00  
cut pump into water line 154+00  
146+00 to 148+56  
From 160+00 Eastward

Down 2 hrs AM waterline



Wrapped to 219+80  
Checked to 214+31  
Accepted to 203+40

210+22 - No side & Bottom  
211+42 - Hole on Top Patch side  
214+42 - Top L 15th hull  
215+32 OK  
216+51 Paper West end  
217+31 OK

10-1-36

1 - clam loading Dump Truck  
for backfill

1 - Dump Truck

2 - Bulldozer - level and  
backfill

Ball hole backfill 148+56 - 160+00

160+00 west board

Final

10-2-36 ✓

- 1- crane Backfill Final
- 2- to Cats backfill and level  
from valve box 160400 to 165410  
on Bellhole backfill and  
complete 144400F

8<sup>30</sup> am Told J.W. we about  
Darling backfill shift  
223199 Patch st side

219403 OK - end of text



Darling starts backfill crew  
and Dann comes on job

10-2-36 ✓

1- crane Backfill Final

2- Gas Cuts .. 4 Level

Bellhole backfill 165+10 to 172+00

Final Backfill 169+00

10-5-36



Crane stacking backfill  
material

1 Bulldozer stacking filling  
and leveling

2 Trucks haul to 223+00E

3<sup>rd</sup> Truck 8<sup>30</sup>am

Moran will handle time

Bill Hoke backfill 172+34 to 174+14

..... 178+00 East to 174+14

West to 180+38 or today

Bill Hoke backfill 172+34 to 180+38

Final Backfill to 177+00



✓  
Bellhake backfill 180+38 to 190+25

Final 177+00

10-6-36

1- Crane

2 Bulldozers

1- Truck haul ahead

1- " " Back

Ball hole backfill 190+25-199+80

Final backfill - 177+00

" " 186+00 190+00

214+50 - 223+00

10-7-36 ✓

1-Crane - Final Backfill ahead <sup>Move</sup>

2-60 cats Backfill and level



10-8-36 V  
Thu

1 crane

1 cat down 8000

1 cat all day

crane backfill

cat level ~~on~~ pile and backfill

To day completes ball hole back

fill on this test 23500F

Final Backfill

10-9-36 V  
Friday

1 crane Final Backfill

1 Bulldozer Level Backfill

Final 17700 18600

21450 22000

18600 19100

Part of labor crew laid off

until next test

✓ 10-10-36 Sat

1 crane 2 Bulldozers backfill

Final 191+00

Ballhole backfill at Elmante

Build Road Grade level & take final  
fill

Final Backfill to 203+00

206+00 - 223+00

Partly 223 - 225+00

Final 225+00 - 235+00

✓ 10-11-36 Sunday

10-12-36 Holiday

✓ 10-13-36 5am 7pm  
Reed-Lacy-Dunn-

Ballhole backfill 235+00 to 244+30

Final backfill -

2 Bulldozers - crane off project

wrapping to 249+08

accepted to 249+08

Reed-Lacy-Dunn 10-14-36 5am 7pm

1 crane 2 Bulldozers Backfill & level

Ballhole 251+49

wrapped to 260+12

accepted to 257+45



5 am 3 pm

10-14-36

Crane 2-60 Cds Grader

Dann-Lacy

Started wrapping today

wrapped & accepted to 272+66

Bellhole back fill 257+45

10-15-36

10-16-36

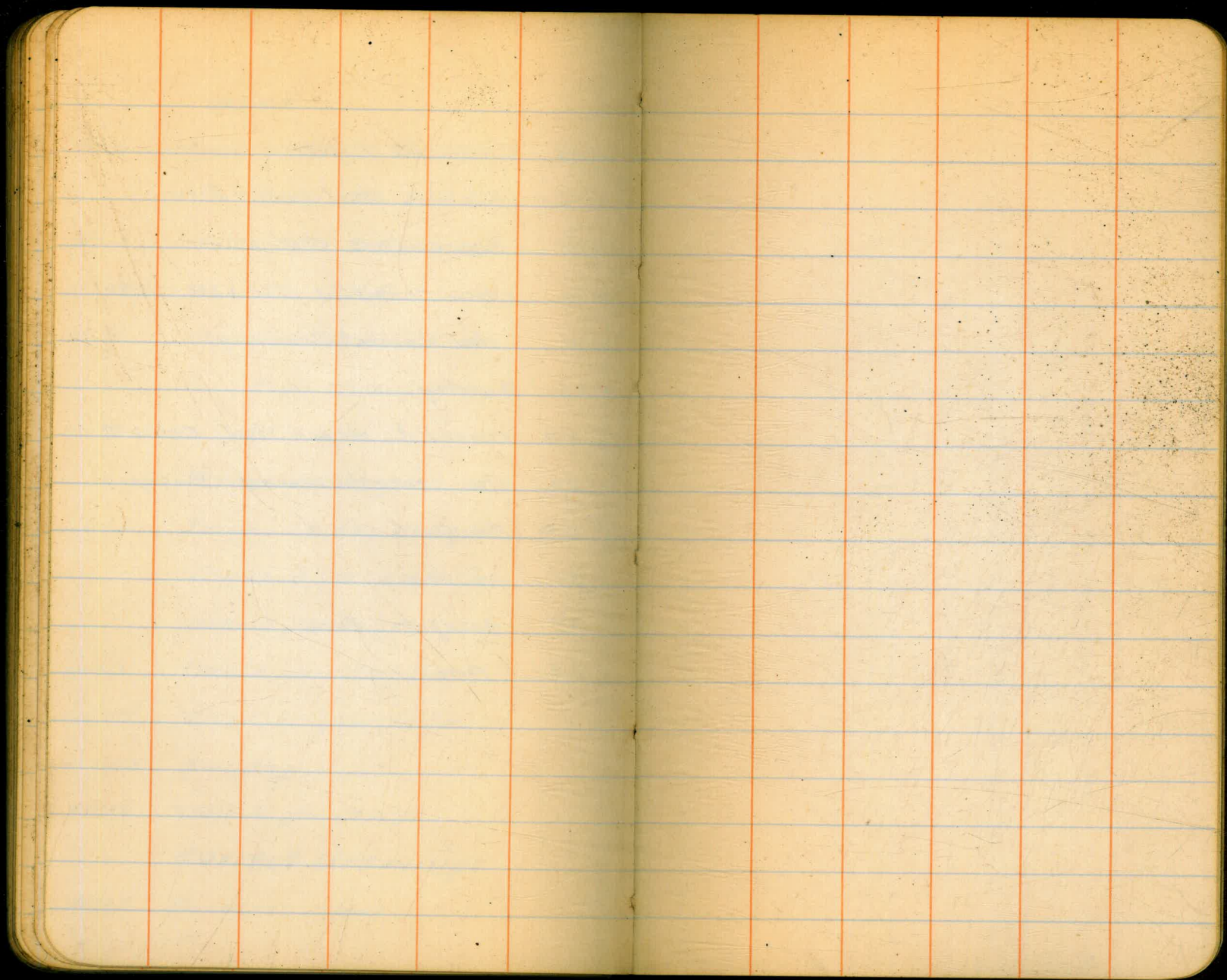
10-17-36

office

11-6 - check yardage tables  
    " class 3 Ex. and estimate  
11-7 " class 3 Excavation  
11-9 " " 4. Ex  
11-9 " class 1 concrete  
    " Pipe Measurements  
11-10 " " " "  
    Trench yardage  
11-12 JWW 10 day report  
    Culverts etc List  
    Trench yardage  
11-13 Trench yardage  
11-14 Trench yardage  
11-15 Sunday  
11-16 Trench yardage  
    correct drawings  
11-17 Backfill - steel

11-18 check Ex Tables -  
    check steel List - Inv  
11-19 check steel - Plat x sec  
11-20 check Final Est - Plat x sec - steel  
11-21 steel - correct drawings  
11-22 Sunday  
11-23 Final Est - Maps - steel - cement  
-24 steel - cement - tracings - Backfill  
25 Backfill  
26 Holiday  
27 Backfill - Final  
28 Final





	9-24	9-25	9-26	9-28
Watkins opt	✓ 7	✓ 7	✓ 5	✓
Sniff	7	✓ 7	✓ 5	
Wolf orie	7	✓ 7	5	
Mull	✓ 7	✓ 7	✓ 5	✓
Redman cat	✓ 7	✓ 7	✓ 5	
Wilmington "	✓ 7	✓	✓ 5	✓
McCormack "	✓	✓	✓ 5	
Lopez "	✓	✓	✓ 5	
McCartney "	98-B	✓	×	
✓ Mswain Lab	✓	✓ 8	×	
✓ McKinley Lab	✓	✓ 8	×	
✓ Garrett	✓	✓ 8	✓	
✓ Boothall	✓	✓ 8	✓	
✓ Davis	✓	✓ 8	✓	
Wanek	✓	✓ 8	SICK ×	
✓ Russel	✓	✓ 8	✓	
✓ Muse	✓	✓ 8	✓	
✓ Dixon	✓	✓ 8	✓	



✓  
Labor

	9-24	9-25	9-26
✓ Gravette	✓	✓	✓
✓ Burnett	✓	✓	✓
✓ Eider		✓	✓
✓ Trelika		✓	✓
✓ Jenkin		✓	✓
✓ Dent		✓	X
✓ Felix		✓	✓
✓ Roeder TUKIY		✓	X
✓ Mangiakob "		✓	X
✓ Pitzer		11002 1002	X
Whitson		11000 1000	X
✓ Jone Tapaui Lap		11000 ✓	✓
✓ Jone Nagu "		11000 ✓	✓
✓ Frazette		✓	
✓ F. M. Archuleta		4✓	✓
✓ Geo. Brown		4✓	✓
✓ Geo. Corey		4✓	✓
✓ J. Wallin		4✓	✓

	9-24	9-25	9-26	9-27
✓ Occult		✓	✓	✓
✓ Burton Forman	✓	✓	✓	✓
✓ JALANISAN				✓



22.0 out.  $\frac{2}{2}$   
232+00

$\frac{+0.0}{38.0}$      $\frac{+0.0}{6.5}$      $\frac{+0.40}{5.4}$

24.1 out from  $\frac{2}{2}$   
231+75

$\frac{-0.30}{40.8}$      $\frac{-0.10}{9.0}$      $\frac{+0.20}{8.0}$

25.1.0 out from  $\frac{2}{2}$   
231+50

$\frac{-1.3}{42.0}$      $\frac{-2.5}{10.5}$      $\frac{+0.20}{7.4}$

Flood: Backfill

Nite  
9-25 112+50 109+50 -112+50 fair - Flood Fill

9-25 118+75 124+50 Good - Blanket

Date	Loads		Excavation		Haul	
	Est	Bank	From	To	sta	To sta
	ydage	ydage	sta	To sta		
4-1-36	241	964	231+50	232+90	228+00	Fill
	119 Rer		232+90	233+65		
4-2-36	34 Dirt		223+00		228+00	Fill
4-3-36						



138+72 Patch So bot Paper narrow OK

139+72 Patch Seal No side OK

140+22 OK 12M

142+82 Patch No Bottom OK

142+32 Seal So side OK

142+62 OK

144+12 OK 9-8-36 OK 6<sup>am</sup>

147+10 Patch Top OK

148+60 OK

Patch 147+30 So side

9-2+31

161+30 Patch pr side

165+70 OK

169+97 OK

174+44 Patch Top

188+13 OK

Carl Venske

639-E Albia Hotel  
SD

111+88 Seal Bottom OK

112+18 " So side OK

112+48 " No side OK

112+78 Patch Top-Seal No Bottom  
Clean out Ball Hole OK

113+08 Patch So side OK

113+38 Patch Bottom Clean Ball OK

114+80 " No side OK

115+70 No side OK

51  
117+25 OK 12<sup>am</sup>  
9-16

119+64 & 119+94 to be wrapped 9-17

123+23 Seal So side East by OK

120+81 OK 9<sup>am</sup>

131+90 OK 1<sup>pm</sup>

134+86 Patch bottom Paper Center

135+46 OK

136+96 Seal No Bottom OK

137+55 So side + No Bot Seal OK

138+15 Seal & Paper narrow OK







CALCULATION OF EARTHWORK.

7 8.33 7.26 9.119 5.5  
152+60 583.1 146.20 150 135  
9712.5 1.80 1.40 1.52+60

#2-38

Width	HEIGHT														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	.18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
11	.20	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85	3.06
12	.22	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33
13	.24	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37	3.61
14	.26	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63	3.89
15	.28	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
16	.30	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15	4.44
17	.31	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41	4.72
18	.33	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00
19	.35	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92	5.28
20	.37	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.56
21	.39	.78	1.17	1.55	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44	5.83
22	.41	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.30	5.70	6.11
23	.43	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96	6.39
24	.44	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22	6.67
25	.46	.92	1.39	1.85	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48	6.94
26	.48	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
27	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
28	.52	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26	7.78
29	.54	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52	8.06
30	.56	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78	8.33
31	.57	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04	8.61
32	.59	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30	8.89
33	.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55	9.17
34	.63	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81	9.44
35	.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08	9.72
36	.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33	10.00
37	.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59	10.28
38	.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85	10.56
39	.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11	10.83
40	.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37	11.11

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if w = 16.2 and h = 3.3, cu. yds. = 1.48 + .028 + .089 = 1.597 cu. yds. or practically 160 cu. yds. per 100 ft. If w exceeds 40 ft., use one half and multiply result by 2, if both w and h are large use one half of each and multiply result by 4. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills) = h, and 1/2 the roadbed = w, add the triangles formed by taking the distance out to each break in turn (=w's) by the difference between the cuts (or fills) on each side of it (=h's) always subtracting the outer from the inner.

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.