

Return to

**STATE HIGHWAY COMMISSION
OF KANSAS**
Topeka

County Pottawatomie Date April 1946
(Missouri to Westmoreland)

Route Section 99-75 FA 432 (U)

Record

Chief of Party Ted L. Sommers
Geologist Stewart P. Verckler

*125 M
100 20
20 20*

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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) ÷ 2 or 2 ft. added to 30.6 = 32.6. For slopes of 1 on 1 1/2 see inside of back cover.
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No.	BST	Fs	Dist.	Rod	Sign Bearing	H. I.	Alq. Diff.	El.	REMARKS
15	T ₃ (cont'd)	530 ^{21.20}	6.5	+4	M	1136.23	+14.7	1124.53	Top 5' Ls. (Eskridge sh.) R.A.
16		385	.2	-	M		-2	1136.03	✓ Neva Ls. R.A.
17		185 ²³⁰	6.7	-	M		-6.7	1129.53	Top Rx Lt. D.
18		110 ¹⁴²⁰	4.4	-8	M		-13.2	1123.03	Base Ls. Lt. D.
19		360 ^{2.7}	16.1	+4	M		-1.7	1134.53	Top Neva Ls. (Slightly Eroded) R.A.
20		270	3.8	+1	M		-1.1	1135.13	" " " Sta. 637187 R.A. D.H.
	T ₄ @		(H.I. = 2.9')			1170.03			
21		430 ³⁴⁴⁰	8.4	-8	M		+42.8	1127.23	
22		330 ⁸¹⁰	6.2	-	M		-6.2	1163.83	Base Cottonwood Ls. R.A. D.
		270	12.3	-3	M		-20.4	1149.63	Top 5' Ls. R.A.
	T ₅	(Sta. 601 + 25)				1174.36			
		480	15.4	-	M		+25.8	1148.56	Lt. Fl. C. Ls. Sta. 606705 Fl. 1148.56
23		1560	11.3	-	M		-11.3	1163.06	Base Cottonwood Ls. R.A. D. 10.4 Spok Sta. 616185 R.A. D.
24		1200	6.4	-	M		-6.4	1167.96	" " " Sta. 613725 Sta. 614435 R.A. D.
25		1310	5.6	-	M		-5.6	1168.76	Top Rx. R.A. D.
26		680	12.1	-	M		-12.1	1162.26	Base Cottonwood Ls. Sta. 616185 R.A. D.
27		275	9.45	-	M		-9.45	1164.91	Top Rx. Sta. 604700 R.A. D.
28		465	13.7	-	M		-13.7	1160.66	Base Cottonwood Ls. Sta. 616185 R.A. D.
	T ₆					1125.83			
		32	1.5	-	M		+1.5	1124.33	1788 Lt. Shoulder road Sta. 570495
29		530 ^{216.50}	8.55	-5	M		-3.505	1090.78	Base Neva Ls. Lt. D.

Remarks.

Alq Diff. El.

H.I.

Sign

Rod

Dist.

Ts

No. BS

30	T ₀ (Cont'd)	125.00	9.6	+2	M	1125.83	Top Neva Co.	+3.4	1129.23	Sta. 562+45 RABE
31	T ₀	650 ^{88°}	7.15	+2	M		" Eroded	+1.65	1127.48	Sta. 580+35 RABE ON side Rd.
32	T ₀	300 ¹⁵⁰	127	-5	M		Base Neva Ls.	-27.7	1198.13	
	T ₀	1270 ^{38.10}	3.2	-3	M			-4.1	1084.53	
33	T ₁ @ 02	4.1.32 ²⁴²⁰	2.9	+2	M	1087.73	Base Neva Ls.	+1.7	1105.03	4%
	T ₀	1270 ^{38.10}	3.6	+3	M			+34.5	1122.23	
	T ₀	5	12.35	-	M	1089.03	(to & cul.)	+12.35		Sta. 564+90 Cul. 4.4.42
34	T ₀	375 ¹¹²⁵	3.9	+3	M		Base Neva Ls.	+7.35	1096.38	4.4.1076.68=El.
35	T ₀	125	1.3	-	M		Top Burr Ls.	-1.3	1087.73	Sta. 567+75 4.4
36	T ₀	70	4.9	-	M		Base	-4.9	1084.13	Sta. 565+25 ✓
37	T ₀	65	9.5	-	M		Top Ls Howe Is	-9.5	1079.53	Sta. 564+70 ✓
38	T ₀	80	12.5	-	M		Base Ls	-12.5	1076.53	4.4 ✓
39	T ₀	80	13.35	-	M		Top Ls	-13.35	1075.68	4.4 ✓
40	T ₀	80	13.9	-	M		Base Ls.	-13.9	1075.13	4.4 ✓
41	T ₀	130	10.3	-	M		Top Ls Howe Sta. 562+70	-10.3	1078.73	(DT) 4.4 ✓
42	T ₀	260 ⁶⁵⁰	17.4	-	M		Base	-17.4	1073.63	4.4 ✓
43	T ₀	340 ⁶⁵⁰	11.6	-2	M		Top Ls. ✓	-18.4	1070.63	Sta. 560+60 ✓
44	T ₀	350 ⁷⁰⁰	11.7	-2	M		Base ✓	-18.7	1070.33	Sta. 560+50 ✓
45	T ₀	750 ^{22.50}	14.0	-3	M		Top Ls. ✓	-36.5	1052.53	4.4 ✓
46	T ₀	790 ^{23.70}	16.35	-3	M		Base ✓	-40.05	1048.98	4.4 ✓

Remarks.

Alq Diff. El.

H.I.

Sign

Rod

Dist.

Ts

No. BS

No. BS	T	Fs	Dist.	Rod	Sign Hair	H.I.	Alg. Diff.	El.	Remarks.
	T ₉					1040.51			T @ Sta. 549 + 55
47		550	11.4 ^{1.0}	-	M		+25.4	1065.91	Sta. 544 + 05 1015.11 F.L. GUL
48		920	6.9	-	M		-6.9	1033.61	Top 11' Ls Blacky-bluff. (Black clay sh. below Ls) R+K
49		900 ^{8.9}	13.0	-	L		-13.0	1027.51	✓ Hd. CA. Foss. (branch) sh. DK gray R+K
50		1680	-5	-	T		+5	1090.01	Top Ls (Green G) 532+75 (K) etc
		1620	2.9	-	M		-2.9	1037.61	Base ✓ 533+35 ✓
	T ₁₀					1064.72			T @ Sta. 524 + 80 F.L. C.H.V. Sta. 538 + 00 (026.02)
51		1320 ^{13.2}	25.5	-1	L		+38.7		Base Glenmoak Ls. Sta. 529 + 10 RT. E. O.A.
52		430	9.9	-	M		-9.9	1054.82	Top Glenmoak Ls. Sta. 528 + 30 ✓
53		350	9.0	-	M		-9.0	1055.72	Top Glenmoak Ls. Sta. 528 + 30 ✓
54		130 ^{13.0}	4.25	-	M		-4.25	1060.47	Base Upper Glenmoak Ls. Sta. 526 + 10 ✓
		1200	11.0	-1	M		23.0	1041.72	Top long crevice Ls. Sta. 512 + 80 W. Sta. 512
	T ₁₁					1011.23			T @ Sta. 461 + 14
55		190 ^{1.9}	1.1	-	M		+1.1	1010.13	→ BM # 46
56		880 ^{8.8}	5.3	-7	M		-66.9	944.33	Base Ls. Five point /s R+K
57		130	11.1	-	M		-11.1	1000.13	Base Ls. AMERICUS 451 + 84 Top Ls. AMERICUS 458 + 84
58		230 ^{2.3}	14.4	-	M		-14.4	996.83	Top Ls. AMERICUS 458 + 84
59		290 ^{2.9}	14.5	-1	M		-17.4	993.83	Base Ls. AMERICUS 458 + 24
		820 ^{8.2}	14.7	-3	M		-39.3	971.23	Top Ls. Woodchane ^{pk} 452 + 94
60		860 ^{8.6}	17.3	-3	L		-43.1	968.13	Base ✓ " " 452 + 54 ✓
	T ₁₂					939.8			T @ Sta. 434 + 54 Flow Be. Sta. 436 + 14 937.0
		160	2.8	-	M		+2.8		

Remarks

Ab Diff. El.

No BS T FS Dist. Rod Sign Hair H.I.

61	Tie	1250 ^{12.5}	.8	+1	M	939.8	+11.7	951.5	Top Ls. Firepoint ls	447.104	L.E. Bksh
62		1250 ^{12.5}	5.1	+1	✓		+7.4	947.2	Base ✓		447.104
63		600	15.6	-	12.6		-15.6	924.2	Base (Ls. # 8 102 ft)		Stream Bank
	T ₁₃	H.I. = 32				932.8	+18.3	914.5	T @ Sta. 384 + 70		
64		195	18.3	-	M		-6.1	926.7	Base ls. Fallcity	380 + 80	Rt E (Dt)
65		410	3.7	-	✓		-3.7	929.1	Top ls. Fallcity	300 + 60	✓
		03 2000	19.1	-	9.1		-19.7	913.7	03 on Br N E.		✓
66	T ₄ @ 03	H.I. = 32				917.3	-16.15	901.15	Top Ls 2000'	N. IN Stream Bd	✓
67		610	16.15	-	13.1		-12.9	904.4	✓	S.	✓
		170	12.9	-	M		+11.8	929.1			
		T ₁₃ 2000	8.2	+1	M						
									Ameroid shot.		
68									Fl. Cul. N Sta. 503 + 00 El. 1028.74		
									Base Nerve	8100' Rt E Sta. 512 + 00	
									1115.00	ls.	
									+7.15		
69	T ₁₅	1000 ^{30.0}	7.15	-3	M	1009.15	-42.4	966.75	Top Ls. (see shot # 61)	Striped	Rt E
70		180	12.4	-	M		-12.4	996.75	Base ss.		Rt E
71		65	9.1	-	M		-9	1000.05	Top ss		Rt E

REMARKS

No	BS	T	FS	Dist.	Rod.	Sign	H.I.	Algh	El.	REMARKS
87				490 ^{4.9}	5.8	-1	999.1	-10.7	988.4	Top 1/5 (eroded) Fire pt 1/s Rld
88				250 ^{2.5}	12.2	-3		-19.7	979.4	Top 4/s Fire points 296+08 Lt dt
89				150	13.25	-1		-13.25	985.85	Top 1/5 Fire pt 297+08 Lt dt
90	T ₁			690 ^{27.6}	19.8	+4	942.00	-7.8		T ₀ 285+48 EL 949.80 RT F.L.L. Calm Sta 292+38 (eroded) west Anandist 285+68 west Anandist St. 286+18 Rldt.
91				20	2.8	-		-2.8	939.20	Top 1/5 (1.5' thick)
92				70	6.4	-		-6.4	935.60	Base limey sh 9 thim/s Rldt.
92										Aneroïd stat from Civ. EL 949.80 Base 1/s. (7' thick) 2050 RTd Sta 285+48
93	T ₂			42	1.7	-	928.34	+1.7		T ₀ 261+79 BM 30 261+70 EL 926.64 (call CIVIL)
94				260	8.4	-		-8.4	919.94	Top of 1/s (call CIVIL) 259+19 Rldt.
94				440	13.6	-		-13.6	914.74	Base of 1/s (call CIVIL) 257+30 Rldt.
95					25.8					T ₀ Rt. Rd. Sta 1102.12 Sto. C83 to Rt. Fl. Elev. 1111.09
95				127 ^{3.4}	3.4	+3		+34.7	1171.59	Rldt.
95	T ₂₄			780	6.7	-	1178.29	+6.7		T @ East of turn #4
95				640 ^{3.2}	9.2	-2		-22.0	1156.29	Backsight to turn #4 (1102.12) Base stw. 1/s Rldt.

No	BS	T	FS	Dist.	Red	Sight	Hor	H.I
								1106.88
117				520 ^{15.6}	14.6	-3	M	
118				100	8.7	-	M	
119				62 ^{15.8}	3.15	-	M	
120				180 ^{15.8}	3.9	+2	M	
				480 ^{14.8}	4.9	+3	M	

Ag. Diff.	EL	Remarks
+30.2		70 569+20 Sta 564400 A.F.L. Culu 1076.68
-8.7	1098.18	TOP RX (Nevo mb.) 548+20 L.H.B.
-3.15	1103.73	Base RX " " 569+82 L.H.B.
-0.3	1106.58	Top RX " " 571+00 L.H.B.
+9.5	1116.38	Base 1/2 " " 574+00 A.F.L. BS

Sta.	Dist to	El above or below %	Depth	Remarks
712+18	20' RA	-1'	0 - 1.0 soil 1.0 - 2.0 shale 2.0 - 0 ls.	
710+70	24' RA	-2'	0 - 1.0 soil 1.0 - 4.2 wh'd gray sh 4.2 - 0 ls.	
698+15	32' Lt	-3.6'	0 - 2.2 soil 2.2 - 4.9 gray shale 4.9 - 0 ls. Top lower memb	
688+25	25' RA	-1.8	0 - 1 soil 1.0 - 2.0 shale 2.0 - 0 ls.	
675+00	20' RA			strong seepage
673+00	27' Lt	-1.8	0 - 0.8 soil 0.8 - 1.2 limy sh.	
648+30	33' Lt	-4.8	0 - 5.0 glacial clay 5.0 - 0 broken ls.	

Water on shale contact seepage 117 RA Pitch

Neva

from base of W. ls. El. 1156.19

weathered top of W. ls.

Weathered of W. ls. 1162.35

651+10 20' LT -2.0 0 - 4.8 glacial clay

666+00 20' LT -2.8 0 - 0.5 soil
0.5 - 0 ls

609+00 24' RT -2.2 0 - 0.8 soil
0.8 - 0 ls

602+00 24' RT -1.8 0 - 1.0 soil
1.0 - 2.0 sh
2.0 - 0 ls. Top of us. (with d)

586+50 24' RT RE 11292
Top Nevq 1.2 above cul

583+75 23' RT -1.8 0 - 2.3 clay soil
2.3 - 0 Top Nevq (with d)

525+00 22' RT -1.8 0 - 1.4 soil
1.4 - 0 Top Glenrock

520+00 20' RT -2.5 0 - 1.5 soil
1.5 - 2.5 gray sh
2.5 - 0 Eroded Top Glenrock

15.17 B.S. RT 8 LT 1.5' soil/cover

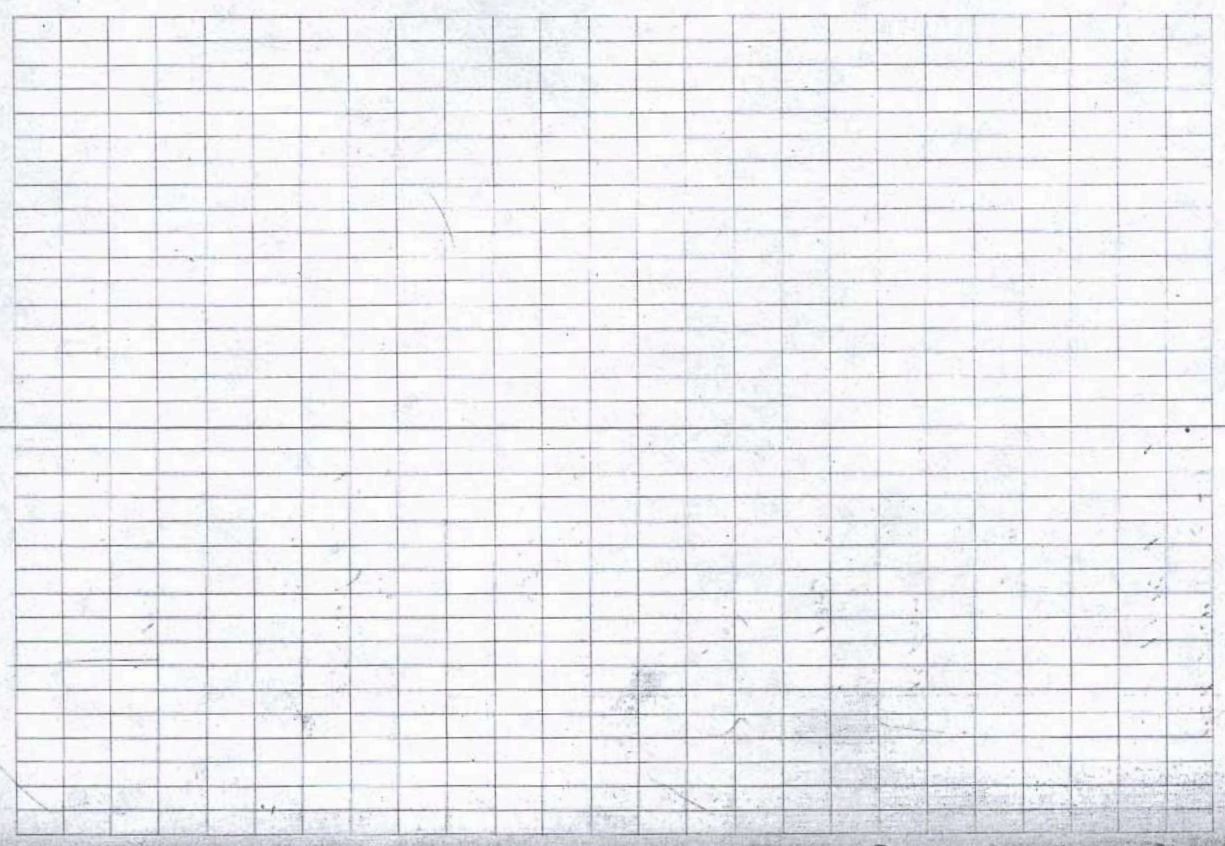
15.17 B.S. RT 8 LT 1.5' soil/cover RT 0.6 LT

at sta. 586+00 RT 1128.00

25584
 23
 46097
 25584
 23
 46097

473+25	30' RT	-3.4	0-2.2 soil 2.2-4.0 gray sh 4.0-0 top ss
470+75	26' RT	-2.3	0-1.0 soil 1.0-1.5 whd ss 1.5-0 same
469+75	30' RT	-2.4	0-1.0 soil 1.0-2.0 gray sh 2.0-0 1/2 top
468+55	28' RT	-2.3	0-.8 soil .8-1.2 gray sh 1.2-0 Top ls
507+00	28' LT	-3.0	0-5.0 glacia/clay
507+90	28' LT	-3.0	0-5.0 glacia/clay
460+47	30' LT	-4.1	0-0.8 soil 0.8-2.6 sh 2.6-0 1/2
462+92	30' RT	-2.6	0-2.0 soil 2.0-7.2 gray sh H.P.
464+55	30' RT	-2.5	0-1.0 soil 1.0-2.6 gray sh

360+00	28' Lt.	-2.6	0 - 7.0 clay 7.0 - 0 same
370+60	28' Lt	-2.9	0 - 2.0 clay soil 2.0 - 2.4 ls. 2.4 - 3.0 gray sh 3.0 - 0 ls. 0.5
371+63	28' Lt	-3.2	0 - 1.5 clay 1.5 - 2.0 Broken Rock 2.0 - 4.2 gray sh slight H/L 4.2 - 0 firm sandy sh
372+78	28' Lt	-3.4	0 - 2.5 clay 2.5 - 4.0 gray sandy sh. 4.0 - 0 same
369+50	28' Lt	-3.1	0 - 1.5 clay soil 1.5 - 1.8 sh. 1.8 - 0 ls
369+10	28' Lt	-2.4	0 - 2.5 clay soil 2.5 - 5.0 sandy sh 5.0 - 0 firm sandy sh



$\frac{1.5}{4.5} = \frac{1}{3}$
 $\frac{21}{11}$
 5 21 30
 327

327774	30' RT	-1.7	0 - 5.6 soil
			5.6 - 9.2 shale
			9.2 - 0 sandsh
302700	28' LT	-3.0	0 - 0.9 soil
			0.9 - 3.0 graysh
			3.0 - 0 same
300783	26' LT	-3.1	0 - 1.0 soil
			1.0 - 2.0 graysh
300735	27' LT	-3.0	0 - 0.7 soil
			0.7 - 2.0 graysh
300700	27' LT	-3.4	0 - 0.5 soil
			0.5 - 1.0 limy sh
			1.0 - 2.0 graysh
299743	25' LT	-3.4	0 - 1.0 soil
			1.0 - 2.0 graysh
299700	30' LT	-3.4	0 - 1.4 soil
			1.4 - 2.4 gray clay

292430 937401
 25470 93550

277+80	28' Lt	-3.00	0-2.5 Soil
			2.5-3.0 Shale
277+20	28' Lt	-3.0	0-1.0 Soil
			1.0-1.4 Sh
			1.4-0 Is.
279+35	30' Rt	(Below RT) -1.5	T.R. EL. 93770
269+25	30' Lt	-3.0	0-2.5 Clay
			2.5-3.6 with Ss
			3.6-0 Is
294+70	30' Lt	-3.4	0-2.1 Soil
			2.1-2.6 Shale
315+00	25' Rt	-2.4	Top. S.S. seeping water
259+50	25' Rt	-2.4	0-3.0 Soil
			3.0-0 Is
263+80	25' Rt	-2.4	0-3.0 Soil
			3.0-4.0 Sh

(Slightly eroded)
 Top Road Below Rt Fl. Col. Sta 279+35 (EL. 9379+00)

239400	25' Rt.	-1.7	0-3.6	glacial clay
140400	25' Rt.	-2.7	0-6.6	clay soil glacial
116400	25' Rt.	-3.6	0-3.6	clay soil glacial
110400	30' Rt.	-3.8	0-3.0	clay soil glacial
92100	30' Rt.	-2.6	0-6.6	clay soil glacial
80400	28 Rt.	-2.6	0-5.0	clay soil glacial
35400	25' Rt.	-2.0	0-3.4	clay soil glacial
254430	25' Rt.	-5.6	0-3.6	glacial clay
252455	25' Rt.	-5.0	0-4.0	glacial clay
272400	30' Rt.	-2.4	0-3.0	clay soil
			3.0-4.5	shale
268410	28' Rt.	-3.2	0-4.0	clay soil
			4.0-8.0	shale

slightly sandy

"

"

576475 25' RT	-2.4	0 - 1.0 soil 1.0 - 2.0 shale 2.0 - 0 /s
575490 25' RT	-2.0	0 - 1.0 soil / s 1.0 - 0 /s Top 2' /s
579475 25' RT	-2.5	0 - 0.8 soil 0.8 - 0 /s Top
582450 18' RT	-0.8	0 - 1.3 Roadfill 1.3 - 0 /s
583440 25' RT	-1.6	0 - 3.0 soil 3.0 - 0 Top /s
582440 25' RT	-1.4	0 - 0.6 soil 0.6 - 0 /s

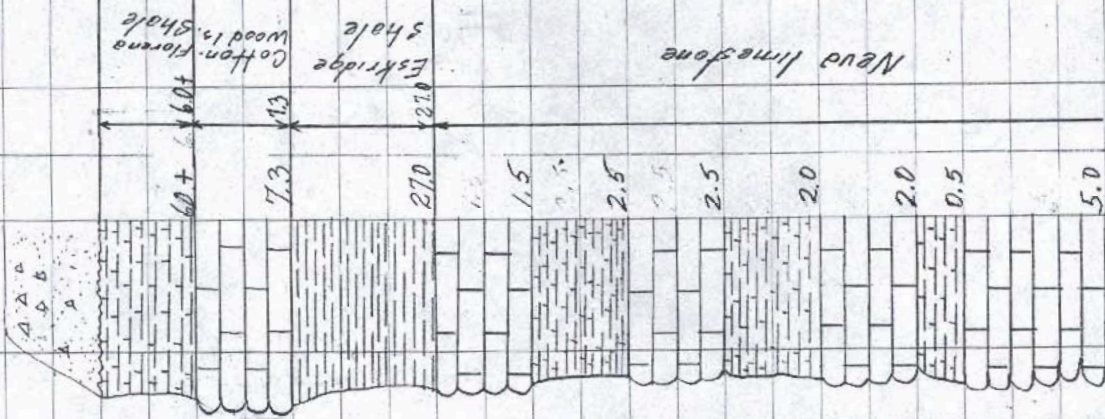
Base of another /s in RT B.S. 1' above hole

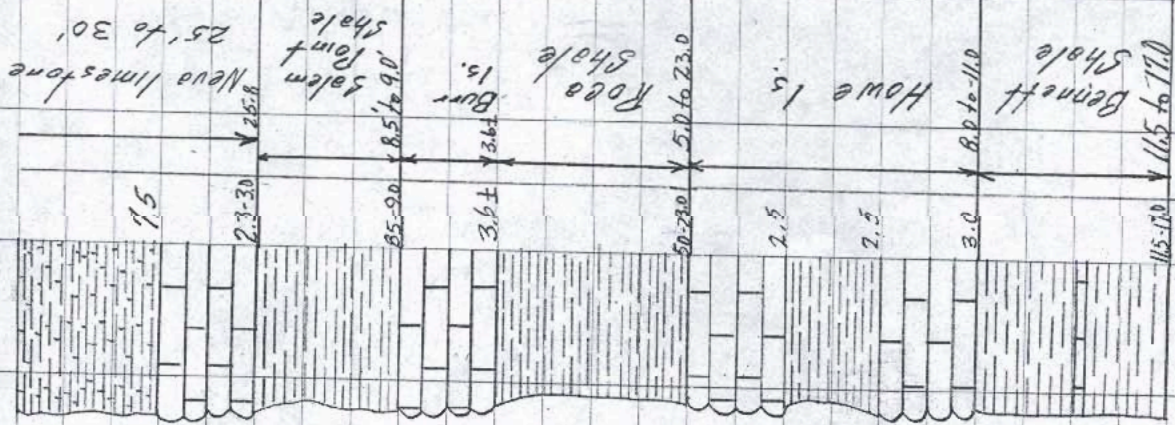
Base of other /s in RT B.S. 2' above /s in hole

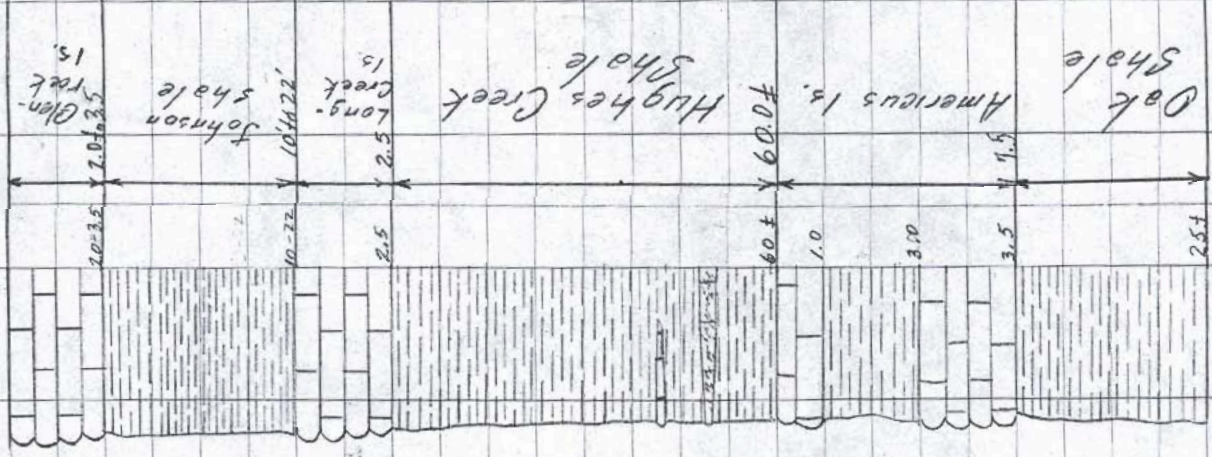
1/2 in RT B.S. above this

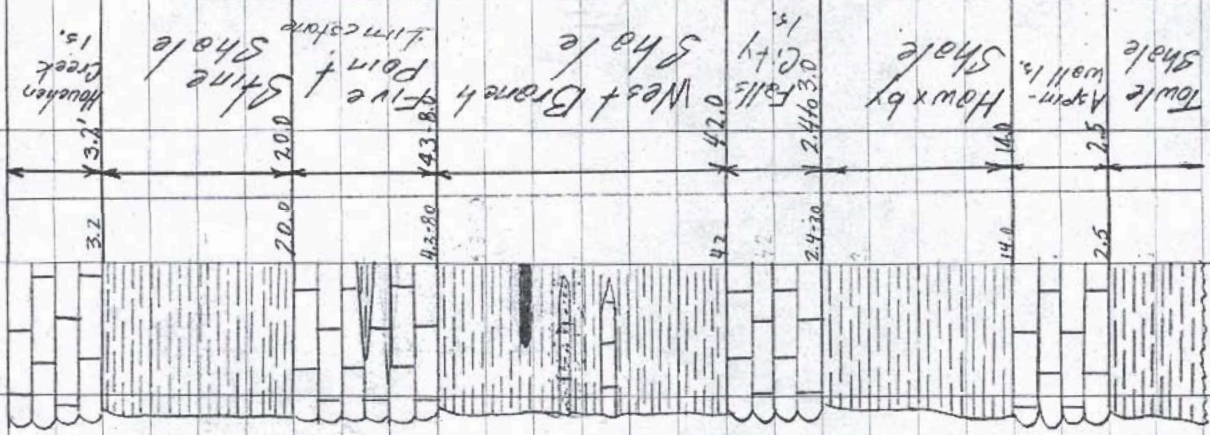
2

Generalized Section









653100
878
67587

outlet drain 673150 to 675130

713' back of alk. at Sta 688+00
outlet pipe had 4' of 11" pipe
at Sta 674+00

outlet drain 687+50 to 688+50

first 4 sections of outlet
collapsed & silt in tile

outlet drain tile collapsed 677+25 to 688+25

outlet drain tile clear 595+50 to 597+00
not carrying much water

Sta 689+00 to 691+00 didn't find

outlet drain Sta 560+00 to Sta 567+00
3" silt in tile opening

Section 8100' BTK

Sta 512 + 00 (78)

gray ls. Base Nevada

green clay sh

gray ls Bunn

gray clay sh

hard blue gray blocky ls

gray clay sh

gray irregular bedded shaly ls

gray clay sh

hard very dark blue gray ls
vert. jointed, blocky fossil frags

gray clay sh

gray slight shaly ls

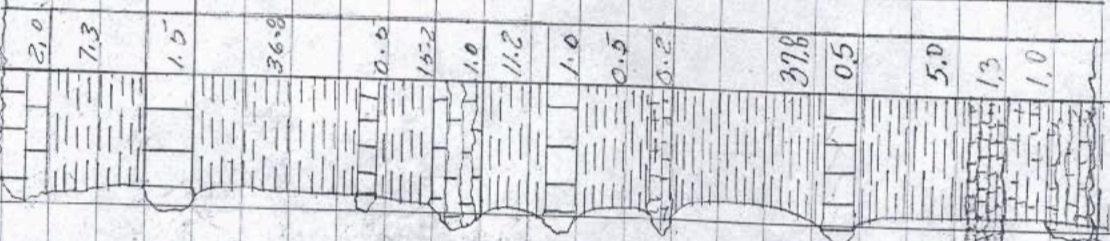
gray clay sh, slightly sandy in
upper part.

44. N. gray ls. weathers slightly
fossil frag.

gray clay sh

gray somewhat sandy in upper part
fossil. base gray. breaks to 1/2 in. gray
in upper part. weathers gray to white
color gray sh.

Nevada ls grey

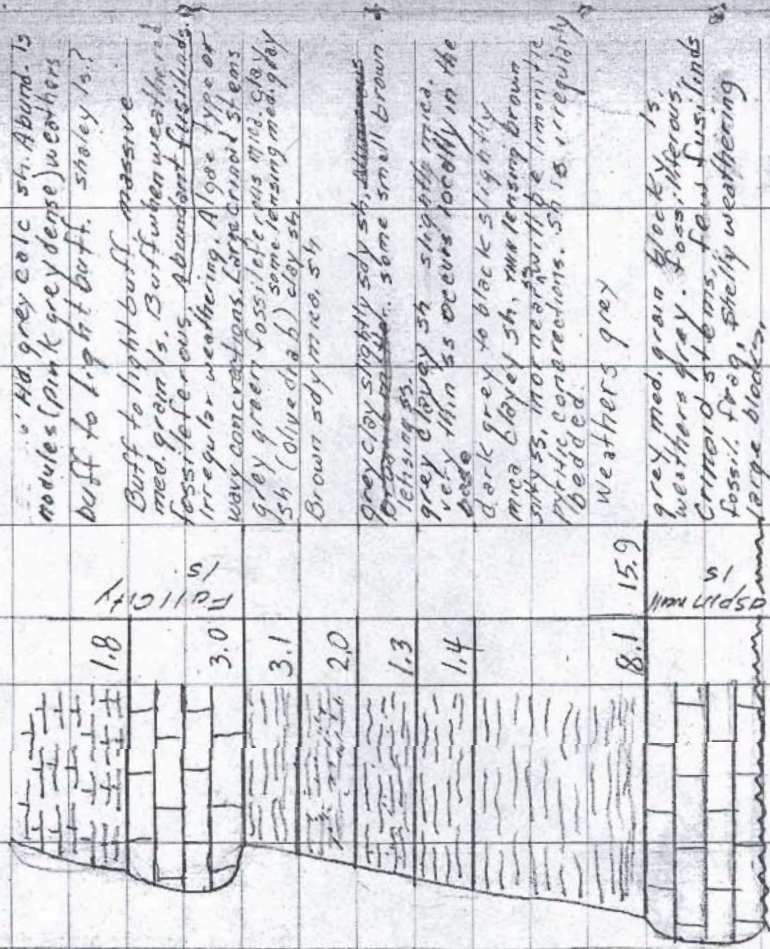


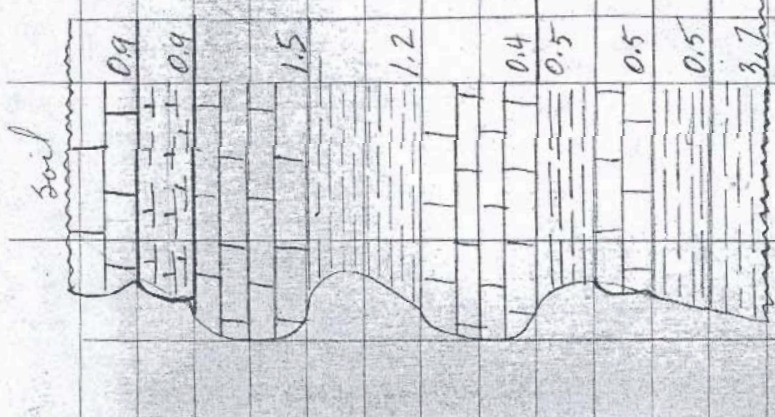
8 hundreds white gray to brownish

upper part weathers light tan to brown
striped

*

Section - 250' RT



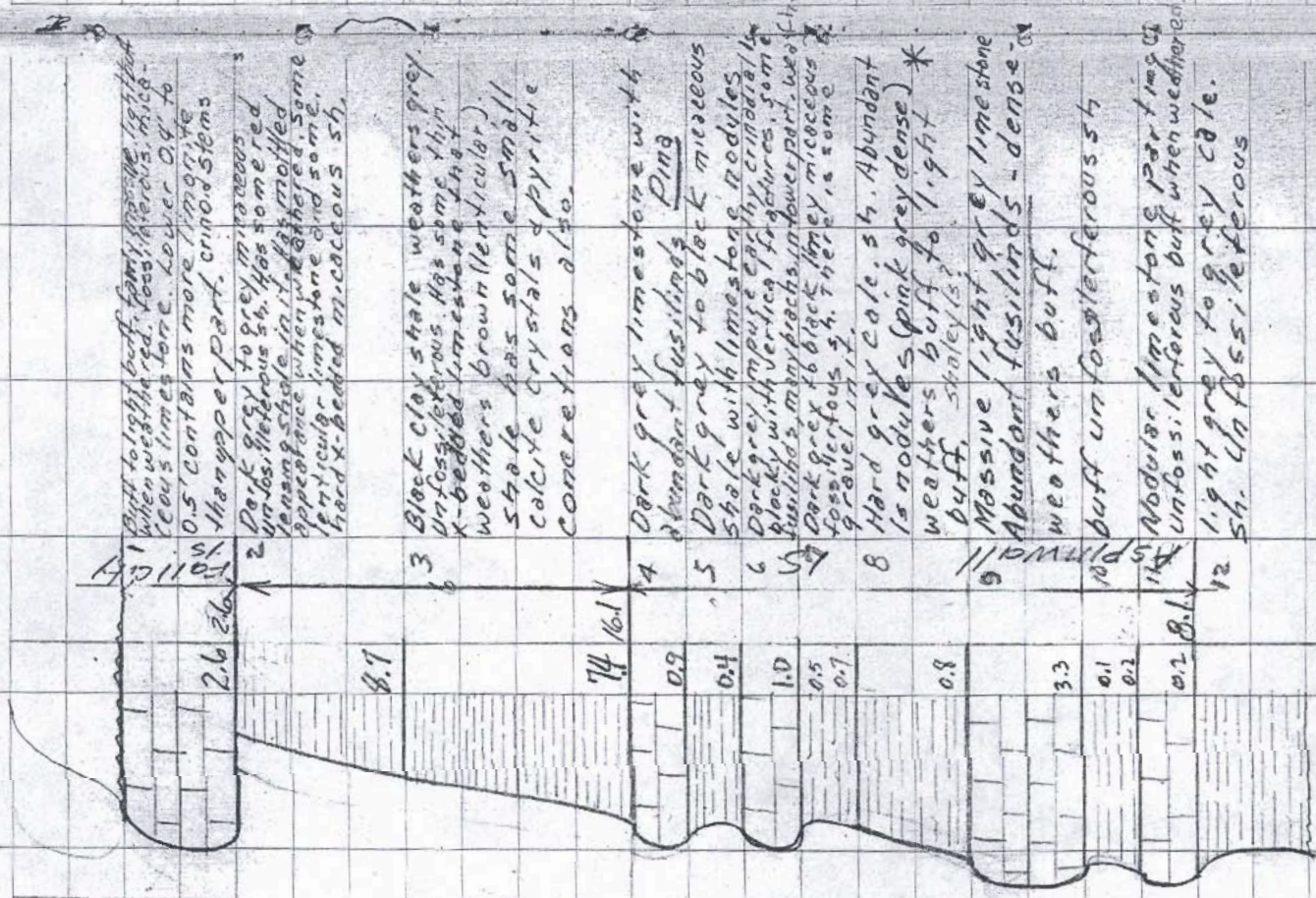


mass grey to buff weathers
buff. Chert. foss. frag. ls.
shaly nodular. lenticular
15.1
Blocky fossiliferous grey to
buff ls. Buff when weathered
Chertites very abundant. Coarse
to medium grain
micro. con. l. grey clay
sh.

buff rotten ls when
weathered. foss. frag
red. micro. sh.
red limey ss.
red micro. sdy. sh
grey clay mic. sh with
colitic concretions.

0.4 4.9
0.5
0.5
0.5
0.5
3.7

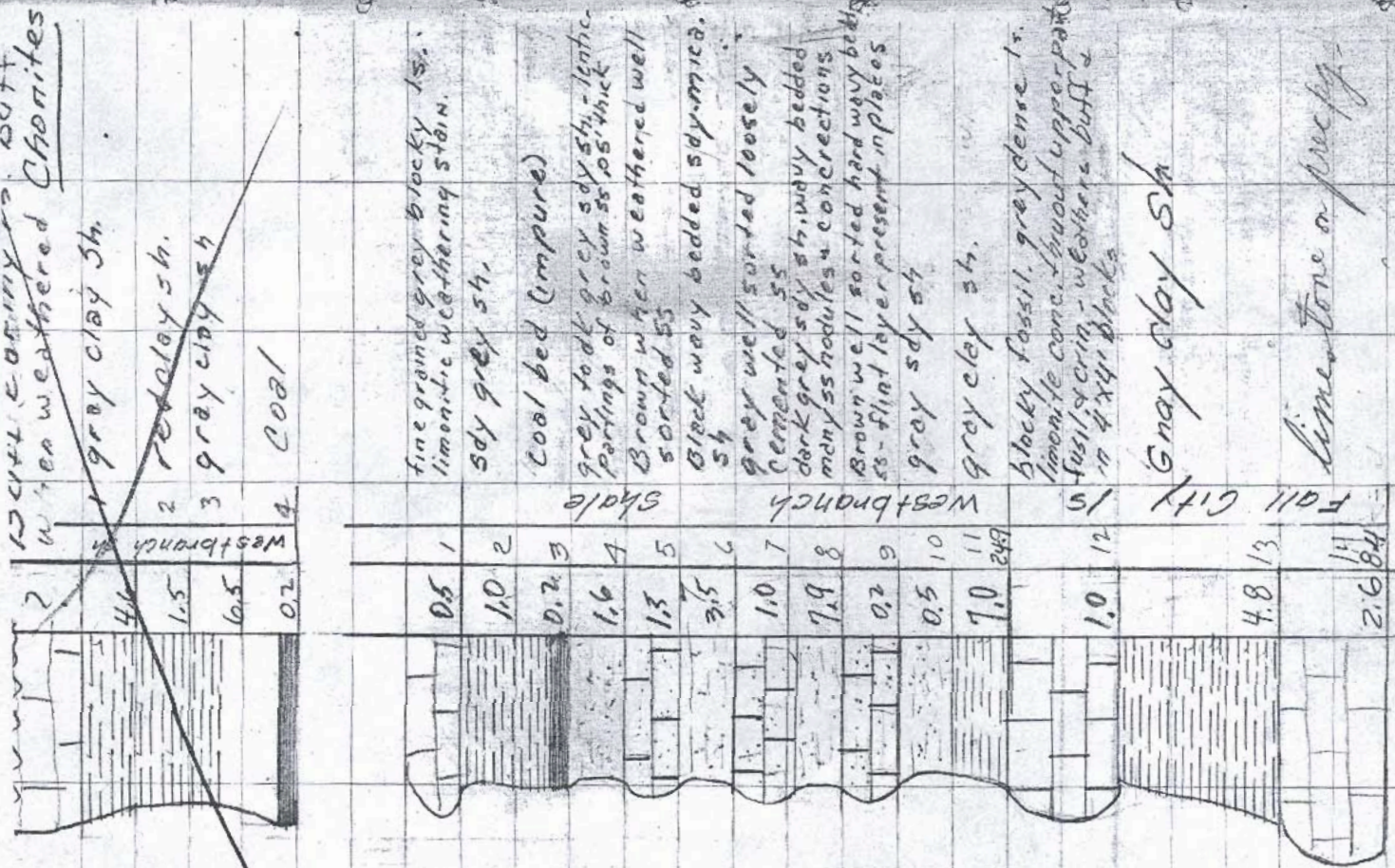
SECTION 2000' West of Sta 384+70



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*

SECTION 1000' North of SECT 1
2000' west of Sta. 304470



~~13 cutt. containing 100% BUTT
when weathered
Chonites~~

1 gray clay sh.
2 red clay sh.
3 gray clay sh.
4 coal

1 0.5 fine grained grey blocky ls. limonitic weathering stain.
2 1.0 sdy grey sh.
3 0.2 coal bed (impure)
4 1.6 grey to dk grey sdy sh. - lentic partings of brown ss 1.05' thick
5 1.3 Brown when weathered well sorted ss
6 3/5 Black wavy bedded sdy mica. sh
7 1.0 grey well sorted loosely cemented ss
8 7.9 dark grey sdy sh. wavy bedded many ss nodules & concretions
9 0.2 Brown well sorted hard wavy bedded ss - flat layer present in places
10 0.5 gray sdy sh
11 7.0 gray clay sh.
12 1.0 blocky fossil. grey dense ls.
13 4.8 limonite conc. throughout upper part of fossiliferous - weathers buff in 4' x 4' blocks
14 2.6 limestone or pure py.

Westbranch shale
Westbranch

Fall City