

PAGE 1 OF EDITING NOTES FOR: MIDDLE FORK - BOONE X-SECTION PROPERTIES RO-FG TW

SECTID	ERROR SEVERITY	FIRST VARIABLE	NO.	ERROR MESSAGE	SECOND VARIABLE	NO.	VALUE ASSUMED
	WARNING	NPR		INVALID			20
RO FG	WARNING	STATION	6	IS LESS THAN	STATION	5	
RO FG	WARNING	STATION	7	IS LESS THAN	STATION	6	
RO FG	WARNING	STATION	8	IS LESS THAN	STATION	7	
RO FG	WARNING	STATION	9	IS LESS THAN	STATION	8	
RO FG	WARNING	STATION	10	IS LESS THAN	STATION	9	
RO FG	WARNING	STATION	11	IS LESS THAN	STATION	10	
RO FG	WARNING	STATION	12	IS LESS THAN	STATION	11	
RO FG	WARNING	STATION	13	IS LESS THAN	STATION	12	
RO FG	WARNING	STATION	14	IS LESS THAN	STATION	13	
RO FG	WARNING	STATION	15	IS LESS THAN	STATION	14	
RO FG	WARNING	STATION	16	IS LESS THAN	STATION	15	
RO FG	WARNING	STATION	17	IS LESS THAN	STATION	16	
RO FG	WARNING	STATION	18	IS LESS THAN	STATION	17	
RO FG	WARNING	STATION	19	IS LESS THAN	STATION	18	
RO FG	WARNING	STATION	20	IS LESS THAN	STATION	19	
RO FG	WARNING	STATION	21	IS LESS THAN	STATION	20	
RO FG	WARNING	STATION	22	IS LESS THAN	STATION	21	
RO FG	WARNING	STATION	23	IS LESS THAN	STATION	22	
RO FG	WARNING	STATION	24	IS LESS THAN	STATION	23	
RO FG	WARNING	STATION	25	IS LESS THAN	STATION	24	
RO FG	WARNING	STATION	26	IS LESS THAN	STATION	25	
RO FG	WARNING	STATION	27	IS LESS THAN	STATION	26	

INPUT SUMMARY FOR: MIDDLE FORK - BOONE X-SECTION PROPERTIES 90-FG TW

1 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 1 TYPE 3 CARDS

KEPT 1 CROSS SECTIONS FOR EDITING

1 " " VALID FOR PROPERTY COMPUTATIONS

0 " " " " PROFILE

CROSS-SECTION PROPERTIES FOR: MIDDLE FORK -- ROONE X-SECTION PROPERTIES RO-FG TW  
 SECID=RO FG AT DISTANCE= 4440 PART 1 OF 2

Exit

WS	A	K	ALPHA	R	P	LEW	DEW	QC
3119.0	14	311	1.00	24	25	0	24	60
3119.2	19	494	1.00	26	27	0	26	92
3119.4	24	726	1.00	27	28	0	27	131
3119.6	30	1000	1.00	27	29	0	28	175
3119.8	35	1327	1.00	28	30	0	29	224
3120.0	41	1698	1.00	29	31	0	30	277
3120.2	47	2116	1.00	30	32	0	30	334
3120.4	53	2582	1.00	30	33	0	31	395
3120.6	59	3097	1.00	31	34	0	32	461
3120.8	66	3070	1.00	40	44	0	49	478
3121.0	75	3341	1.00	48	52	0	49	530
3121.2	84	4160	1.00	48	53	0	49	636
3121.4	94	5072	1.00	47	53	0	49	747
3121.6	103	5939	1.00	47	54	0	49	865
3121.8	113	6834	1.00	47	54	0	49	988
3122.0	122	7770	1.00	47	55	0	49	1116
3122.2	131	8742	1.00	47	55	0	49	1249
3122.4	141	9750	1.00	47	55	0	49	1387
3122.6	150	10790	1.00	46	56	0	49	1530
3122.8	159	11861	1.00	46	56	0	49	1677
3123.0	168	12963	1.00	46	57	0	49	1828
3123.2	178	14091	1.00	46	57	0	49	1983
3123.4	187	15245	1.00	46	58	0	49	2143
3123.6	196	16423	1.00	46	58	0	49	2306
3123.8	205	17624	1.00	45	59	0	49	2473
3124.0	214	18848	1.00	45	59	0	49	2643
3124.2	223	20091	1.00	45	59	0	49	2818
3124.4	232	21353	1.00	45	60	0	49	2995
3124.6	241	22634	1.00	45	60	0	49	3176
3124.8	250	23931	1.00	45	61	0	49	3360
3125.0	259	25246	1.00	44	61	0	49	3548
3125.2	268	26575	1.00	44	62	0	49	3739
3125.4	277	27917	1.00	44	62	0	49	3932
3125.6	285	29263	1.00	44	62	0	49	4132
3125.8	294	30618	1.00	44	63	0	49	4335
3126.0	303	31984	1.00	43	63	0	49	4541
3126.2	311	33356	1.00	43	64	0	49	4749
3126.4	320	34735	1.00	43	64	0	49	4960
3126.6	328	36120	1.00	43	65	0	49	5175
3126.8	337	37511	1.00	42	65	0	49	5391
3127.0	345	38908	1.00	42	66	0	49	5611
3127.2	354	40308	1.00	42	66	0	49	5833
3127.4	362	41711	1.00	42	67	0	49	6058
3127.6	370	43117	1.00	41	67	0	49	6286
3127.8	379	44525	1.00	41	68	0	49	6515

Main Rottens  
 $3120.0 - \frac{16}{40} = 3119.4$

3125.54  
 A = 285  
 K = 24196  
 alpha = 1.00

$\frac{1}{2} = \frac{3940}{265}$

500% 3127.52 A =

3123.4 Q<sub>10</sub> = 2140 TW 3123.36 K<sub>L</sub> = 15205

$h_1 = 3125.82 \times 10$   
 $Q_{50} = 3050 h_c = 2120.87$

$\frac{4132}{3932} = \frac{Q}{100} = \frac{Y}{2}$   
 $Q = 5140 h_c = 3125.41$

$\frac{37}{224} = \frac{Y}{2} h_c = 3127.04 K_L = 39156$

$Q = 4.5 \times 10^3$   
 $(F) = 3$

CROSS-SECTION PROPERTIES FOR: MIDDLE FORK - BOONE X-SECTION PROPERTIES RO-FG T4  
 SECID=RO FG AT DISTANCE= 4440 PART 2 OF 2

WS	A	K	ALPHA	B	P	LEW	REW	OC
3128.0	387	45937	1.00	41	68	0	49	6748
3128.2	395	47348	1.00	41	68	0	49	6983
3128.4	403	48760	1.00	40	69	0	49	7220
3128.6	411	50172	1.00	40	69	0	49	7459
3128.8	419	51584	1.00	40	70	0	49	7701
3129.0	427	52971	1.00	40	70	0	49	7954
3129.2	435	54350	1.00	39	71	0	49	8208
3129.4	443	55723	1.00	39	71	0	49	8466
3129.6	451	57090	1.00	39	72	0	49	8725
3129.8	459	58449	1.00	38	72	0	49	8987
3130.0	466	59803	1.00	38	73	0	49	9252
3130.2	474	61146	1.00	38	73	0	49	9519
3130.4	481	62492	1.00	37	74	0	49	9788
3130.6	489	63809	1.00	37	74	0	49	10059
3130.8	496	65127	1.00	37	75	0	49	10333
3131.0	503	66437	1.00	36	76	0	49	10609
3131.2	511	67736	1.00	36	76	0	49	10887
3131.4	518	69008	1.00	36	77	0	49	11174
3131.6	525	70250	1.00	35	77	0	49	11469
3131.8	532	71478	1.00	35	78	0	49	11767
3132.0	539	72691	1.00	35	78	0	49	12068
3132.2	546	73888	1.00	34	79	0	49	12372
3132.4	553	75070	1.00	34	79	0	49	12678
3132.6	559	76235	1.00	33	80	0	49	12987
3132.8	566	77384	1.00	33	81	0	49	13298
3133.0	573	78518	1.00	33	81	0	49	13613
3133.2	579	79634	1.00	32	82	0	49	13930
3133.4	586	80708	1.00	32	82	0	49	14262
3133.6	592	81737	1.00	31	83	0	49	14609
3133.8	598	82743	1.00	31	84	0	49	14958
3134.0	604	83728	1.00	30	84	0	49	15313
3134.2	610	84689	1.00	30	85	0	49	15672
3134.4	616	85628	1.00	29	85	0	49	16035
3134.6	622	86544	1.00	29	86	0	49	16402
3134.8	628	87437	1.00	28	87	0	49	16775
3135.0	633	88275	1.00	28	87	0	49	17170
3135.2	639	89053	1.00	27	88	0	49	17590
3135.4	644	89803	1.00	26	89	0	49	18017
3135.6	649	90525	1.00	26	90	0	49	18452
3135.8	654	91217	1.00	25	90	0	49	18898
3136.0	659	91882	1.00	25	91	0	49	19352
3136.2	664	92517	1.00	24	92	0	49	19815
3136.4	669	93012	1.00	23	93	0	49	20360
3136.6	673	93471	1.00	22	94	0	49	20942
3136.8	678	93894	1.00	22	95	0	49	21535



SECID	ERROR SEVERITY	FIRST VARIABLE	NO.	ERROR MESSAGE	SECOND VARIABLE	NO.	VALUE ASSUMED
	WARNING	NPR		INVALID			20
80 AP	WARNING	STATION	11	IS LESS THAN	STATION	10	
80 AP	WARNING	STATION	12	IS LESS THAN	STATION	11	
80 AP	WARNING	STATION	13	IS LESS THAN	STATION	12	
80 AP	WARNING	STATION	14	IS LESS THAN	STATION	13	
80 AP	WARNING	STATION	15	IS LESS THAN	STATION	14	
80 AP	WARNING	STATION	16	IS LESS THAN	STATION	15	
80 AP	WARNING	STATION	17	IS LESS THAN	STATION	16	
80 AP	WARNING	STATION	18	IS LESS THAN	STATION	17	
80 AP	WARNING	STATION	19	IS LESS THAN	STATION	18	
80 AP	WARNING	STATION	20	IS LESS THAN	STATION	19	
80 AP	WARNING	STATION	21	IS LESS THAN	STATION	20	
80 AP	WARNING	STATION	22	IS LESS THAN	STATION	21	
80 AP	WARNING	STATION	23	IS LESS THAN	STATION	22	
80 AP	WARNING	STATION	24	IS LESS THAN	STATION	23	
80 AP	WARNING	STATION	25	IS LESS THAN	STATION	24	
80 AP	WARNING	STATION	26	IS LESS THAN	STATION	25	
80 AP	WARNING	STATION	27	IS LESS THAN	STATION	26	
80 AP	WARNING	STATION	28	IS LESS THAN	STATION	27	
80 AP	WARNING	STATION	29	IS LESS THAN	STATION	28	
80 AP	WARNING	STATION	30	IS LESS THAN	STATION	29	
80 AP	WARNING	STATION	31	IS LESS THAN	STATION	30	
80 AP	WARNING	STATION	32	IS LESS THAN	STATION	31	

USGS STEP-BACKWATER PROGRAM - VERSION 76.170 \*\*\* PAGE COUNT= 3. DATE= 3/11/77

INPUT SUMMARY FOR: MIDDLE FORK - BOONE X-SECTION PROPERTIES BO-FG AP //

1 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 1 TYPE 3 CARDS.

KEPT 1 CROSS SECTIONS FOR EDITING.

1 " " VALID FOR PROPERTY COMPUTATIONS

0 " " " " PROFILE "

CROSS-SECTION PROPERTIES FOR: MIDDLE FORK - BOONE X-SECTION PROPERTIES BO-F6 AP  
 SECID=BO AP AT DISTANCE= 0 PART 1 OF 2

Entrance

Head bottom Elev =  
 $3121.0 - \frac{38}{40} = 3120.2$

WS	A	K	ALPHA	B	D	LEW	RFW	QC
3121.0	38	1045	1.00	48	49	0	48	191
3121.2	47	1509	1.00	47	50	0	48	268
3121.4	57	2080	1.00	47	50	0	48	352
3121.6	66	2736	1.00	47	51	0	48	445
3121.8	76	3478	1.00	47	51	0	48	543
3122.0	85	4308	1.00	47	52	0	48	649
3122.2	94	5215	1.00	47	52	0	48	760
3122.4	104	6068	1.00	46	52	0	48	877
3122.6	113	6962	1.00	46	53	0	48	999
3122.8	122	7896	1.00	46	53	0	48	1126
3123.0	131	8867	1.00	46	54	0	48	1258
3123.2	140	9871	1.00	46	54	0	48	1394
3123.4	150	10908	1.00	46	55	0	48	1535
3123.6	159	11975	1.00	46	55	0	48	1681
3123.8	168	13071	1.00	45	55	0	48	1830
3124.0	177	14196	1.00	45	56	0	48	1984
3124.2	186	15345	1.00	45	56	0	48	2141
3124.4	195	16518	1.00	45	57	0	48	2303
3124.6	204	17713	1.00	45	57	0	48	2468
3124.8	213	18931	1.00	45	58	0	48	2636
3125.0	222	20170	1.00	44	58	0	48	2808
3125.2	231	21427	1.00	44	59	0	48	2984
3125.4	239	22702	1.00	44	59	0	48	3163
3125.6	248	23994	1.00	44	60	0	48	3344
3125.8	257	25292	1.00	44	60	0	48	3533
3126.0	266	26604	1.00	44	60	0	48	3725
3126.2	274	27928	1.00	43	61	0	48	3919
3126.4	283	29255	1.00	43	61	0	48	4117
3126.6	292	30595	1.00	43	62	0	48	4317
3126.8	300	31943	1.00	43	62	0	48	4521
3127.0	309	33299	1.00	42	63	0	48	4727
3127.2	317	34660	1.00	42	63	0	48	4935
3127.4	326	36027	1.00	42	64	0	48	5148
3127.6	334	37398	1.00	42	64	0	48	5362
3127.8	342	38774	1.00	41	65	0	48	5579
3128.0	350	40156	1.00	41	65	0	48	5799
3128.2	359	41538	1.00	41	65	0	48	6021
3128.4	367	42923	1.00	41	66	0	48	6246
3128.6	375	44309	1.00	40	66	0	48	6473
3128.8	383	45697	1.00	40	67	0	48	6703
3129.0	391	47086	1.00	40	67	0	48	6935
3129.2	399	48450	1.00	40	68	0	48	7177
3129.4	407	49810	1.00	39	68	0	48	7421
3129.6	415	51163	1.00	39	69	0	48	7668
3129.8	423	52512	1.00	39	69	0	48	7917

104 R=2140 Bc=2124.2 kc=15346

Qc = 5020 hc = 2125.19

$\frac{417}{178} = \frac{21}{198} = \frac{7}{72}$

Qc = 3126.22 hc = 3740  
 hc = 28058

500 Qc = 5650  $\frac{51}{120} = \frac{7}{12}$  hc = 3128.88 hc = 41708



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CROSS-SECTION PROPERTIES FOR: MIDDLE FORK -- BOONE X-SECTION PROPERTIES RO-FG AP  
SECID=80 AP AT DISTANCE= 0 PART 2 OF 2

WS	A	K	ALPHA	B	P	LFW	PFW	GC
3130.0	430	53855	1.00	38	70	0	48	8168
3130.2	438	55190	1.00	38	70	0	48	8422
3130.4	445	56518	1.00	38	71	0	48	8679
3130.6	453	57839	1.00	37	71	0	48	8937
3130.8	460	59151	1.00	37	72	0	48	9198
3131.0	468	60456	1.00	37	72	0	48	9462
3131.2	475	61752	1.00	36	73	0	48	9727
3131.4	482	63038	1.00	36	73	0	48	9995
3131.6	490	64299	1.00	36	74	0	48	10270
3131.8	497	65531	1.00	35	75	0	48	10554
3132.0	504	66750	1.00	35	75	0	48	10841
3132.2	511	67952	1.00	35	76	0	48	11130
3132.4	518	69140	1.00	34	76	0	48	11422
3132.6	524	70313	1.00	34	77	0	48	11717
3132.8	531	71470	1.00	33	77	0	48	12014
3133.0	538	72613	1.00	33	78	0	48	12314
3133.2	544	73739	1.00	33	78	0	48	12617
3133.4	551	74848	1.00	32	79	0	48	12922
3133.6	557	75917	1.00	32	80	0	48	13241
3133.8	564	76941	1.00	31	80	0	48	13573
3134.0	570	77944	1.00	31	81	0	48	13910
3134.2	576	78924	1.00	30	82	0	48	14250
3134.4	582	79881	1.00	30	82	0	48	14594
3134.6	588	80816	1.00	29	83	0	48	14943
3134.8	594	81729	1.00	29	84	0	48	15295
3135.0	599	82621	1.00	28	84	0	48	15654
3135.2	605	83456	1.00	28	85	0	48	16032
3135.4	610	84234	1.00	27	86	0	48	16434
3135.6	616	84984	1.00	26	86	0	48	16843
3135.8	621	85706	1.00	26	87	0	48	17260
3136.0	627	86409	1.00	25	87	0	48	17686
3136.2	631	87064	1.00	25	88	0	48	18120
3136.4	626	87699	1.00	24	89	0	48	18563
3136.6	641	88198	1.00	23	90	0	48	19009
3136.8	645	88662	1.00	22	91	0	48	19576
3137.0	650	89090	1.00	22	92	0	48	20202
3137.2	654	89481	1.00	21	93	0	48	20788
3137.4	658	89837	1.00	20	94	0	48	21398
3137.6	662	90037	1.00	19	95	0	48	22150
3137.8	665	90196	1.00	18	96	0	48	22947
3138.0	669	90313	1.00	17	97	0	48	23800
3138.2	672	90388	1.00	16	98	0	48	24714
3138.4	676	90264	1.00	15	99	0	48	25691
3138.6	678	90091	1.00	13	101	0	48	27293
3138.8	681	89872	1.00	12	102	0	48	28837



USGS STEP-BACKWATER PROGRAM - VERSION 16.170 \*\*\* PAGE COUNT= 2. DATE= 3/14/77

PAGE 1 OF EDITING NOTES FOR: MIDDLE FORK - BOONE X-SECTION PROPERTIES 0

SECID	ERROR SEVERITY	FIRST VARIABLE	NO.	ERROR MESSAGE	SECOND VARIABLE	NO.	VALUE ASSUMED
	WARNING	NPR		INVALID			20

USGS STEP-BACKWATER PROGRAM - VERSION 76.170 \*\*\* PAGE COUNT= 3. DATE= 3/14/77

INPUT SUMMARY FOR: MIDDLE FORK - ROONE Y-SECTION PROPERTIES

1 CROSS SECTIONS SPECIFIED (OR ASSUMED)

FOUND 1 TYPE 3 CARDS

KEPT 1 ~~CROSS~~ SECTIONS FOR EDITING

1 " " VALID FOR PROPERTY COMPUTATIONS

0 " " " " PROFILE "



CROSS SECTION PROPERTIES FOR: MIDDLE FORK - ROONE X-SECTION PROPERTIES  
 SECID=6 AT DISTANCE= 4726 PART 1 OF 2

MS	A	K	ALPHA	B	P	OLEW	REFW	QC
3122.0	48	1791	1.01	35	35	23	58	316
3122.2	55	2232	1.02	36	36	23	58	383
3122.4	62	2714	1.03	36	37	22	58	455
3122.6	69	3241	1.03	37	38	22	59	531
3122.8	77	3840	1.04	37	38	21	59	612
3123.0	84	4491	1.05	38	39	21	59	698
3123.2	92	5194	1.05	39	40	21	59	784
3123.4	100	5949	1.06	39	41	20	60	876
3123.6	108	6759	1.07	40	41	20	60	971
3123.8	116	7624	1.08	41	42	20	60	1070
3124.0	124	8547	1.08	41	43	19	60	1172
3124.2	132	9527	1.09	42	44	19	61	1278
3124.4	141	10566	1.10	42	44	18	61	1386
3124.6	149	11666	1.11	43	45	18	61	1498
3124.8	158	12672	1.11	44	46	18	61	1615
3125.0	167	13738	1.12	44	47	17	62	1734
3125.2	176	14843	1.12	45	47	17	62	1857
3125.4	195	15982	1.13	46	48	17	62	1980
3125.6	194	17162	1.14	47	49	16	63	2105
3125.8	203	18382	1.15	47	50	16	63	2234
3126.0	213	19643	1.15	48	51	16	64	2367
3126.2	223	20944	1.16	49	52	15	64	2503
3126.4	233	22285	1.17	50	53	15	64	2642
3126.6	243	23667	1.17	51	54	14	65	2785
3126.8	253	25089	1.18	51	54	14	65	2931
3127.0	263	26554	1.19	52	55	14	66	3080
3127.2	274	28059	1.19	53	56	13	66	3233
3127.4	284	29604	1.20	54	57	13	67	3389
3127.6	295	31191	1.21	54	58	13	67	3549
3127.8	306	32819	1.21	55	59	12	67	3712
3128.0	317	34491	1.22	56	60	12	68	3879
3128.2	328	36203	1.22	57	61	11	68	4049
3128.4	340	37957	1.23	58	62	11	69	4222
3128.6	351	39753	1.24	58	62	11	69	4400
3129.8	363	41591	1.24	59	63	10	70	4580
3129.0	375	43474	1.25	60	64	10	70	4765
3129.2	387	45197	1.25	61	65	10	70	4952
3129.4	399	47363	1.26	61	66	9	71	5144
3129.6	412	49373	1.27	62	67	9	71	5339
3129.8	424	51425	1.27	63	68	8	72	5537
3130.0	437	53524	1.28	64	69	8	72	5740
3130.2	450	55663	1.28	65	69	8	72	5946
3130.4	463	57847	1.29	65	70	7	73	6155
3130.6	476	60063	1.29	66	71	7	73	6363
3130.8	489	62314	1.30	67	72	7	74	6569

CROSS-SECTION PROPERTIES FOR: MIDDLE FORK - BOONE X-SECTION PROPERTIES G  
 SFCID=G AT DISTANCE= 4726 PART 2 OF 2

MS	A	K	ALPHA	P	D	LEW	RFW	OC
3131.0	503	64615	1.31	68	73	6	74	6778
3131.2	517	66959	1.31	69	74	6	75	6992
3131.4	531	69350	1.32	70	75	6	76	7210
3131.6	545	71789	1.32	71	77	5	76	7432
3131.8	559	74275	1.32	72	78	5	77	7657
3132.0	574	76812	1.34	73	79	4	77	7888
3132.2	588	79394	1.34	74	80	4	78	8122
3132.4	603	82025	1.35	75	81	4	79	8350
3132.6	618	84704	1.35	76	82	3	79	8502
3132.8	633	87432	1.36	77	83	3	80	8840
3133.0	649	90213	1.36	78	84	3	80	9100
3133.2	665	93041	1.37	79	85	2	81	9356
3133.4	680	95918	1.37	80	86	2	82	9615
3133.6	697	98846	1.38	81	87	1	82	9879
3133.8	713	101824	1.38	82	88	1	83	10147
3134.0	729	104856	1.39	83	89	1	83	10420
3134.2	745	107937	1.39	84	90	0	84	10698
3134.4	763	111215	1.39	84	91	0	84	11036

