7-7-1992

Ex. 280-US-481

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Oregon Department of Fish and Wildlife

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ODFW AQUATIC INVENTORY PROJECT

STREAM REPORT

STREAM: Deming Creek

BASIN: South Fork Sprague River

DATES: July 2-7, 1992

CREW: Scott Loerts / Robert Bradley

STREAM ORDER: 2 BASIN AREA: 14.29 km^2 NUMBER OF TRIBUTARIES: 4

USGS MAPS: Campbell Reservoir, Gearhart Mountain

GENERAL DESCRIPTION: The survey of Deming Creek began upstream of the head of a diversion canal that was 400 m below an unimproved campground (posted as Vincent Flats) on USFS spur road 018. The survey continued for 7,367 m and ended at the forks of a tributary near the boundary of the Gearhart Mountain Wilderness Area. Land use was predominantly light grazing and second growth forest and clear-cut forest. The stream was constrained by open and moderate v-shaped hillslopes. Dominant habitat types were rapids (65%), cascades (14%) and riffles (12%). Dominant substrate types were cobble (30%), gravel (28%) and boulders (21%). Redband trout and bull trout were observed during the survey.

REACH DESCRIPTIONS:

Reach 1: (T36S-R15E-SW16) Length 1,568 meters. This reach began at a concrete diversion head of a canal that was approximately 400 m downstream of Vincent Flats campground. The average gradient was 3.9 % and the valley width index average was 1.8 with a range of 1.5 - 2.5. The reach was constrained 100% by hillslope. Large woody debris volume was 22 m^3. Dominant habitat types consisted of rapids (48%), riffles (31%) and scour pools (14%).

Reach 2: (T36S-R15E-NE16) Length 3,696 m. The average gradient was 5.6% and the valley width index average was 1.8 with a range of 1.5-2.0. The reach was constrained 100 percent by moderate v-shaped hillslopes. Large woody debris volume was 97 m^3. Dominant habitat types included rapids (77%), riffles (7%) and cascades (7%).

Reach 3: (T36S-R15E-NE11) Length 1,968 m. There was a gauging station within this reach. The average gradient was 12.0% and the valley width index average was 1.8 with a range of 1.5-2.5. The reach was constrained 100 percent by steep v-shaped hillslopes. Large woody debris volume was 240 m^3. Dominant habitat types consisted of rapids (54%) and cascades (38%).

COMMENTS: Bull Trout and Redband Trout were observed to inhabit Deming Creek beyond the extent of this survey and into the Gearhart Mountain Wilderness.*

*Ziller, J.S., 1992. "Distribution and Relative Abundance of Bull Trout in the Sprague River Subbasin, Oregon", Proceedings of the Gearhart Mountain Bull Trout Workshop Oregon Chapter of the American Fisheries Society. Pages 18-29.

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
Steep V-shape	0	Constraining Terraces	0
Moderate V-shape	55	Multiple Terraces	0
Open V-shape	45	Wide Floodplain	0

Valley Width Index average: 1.8 range: 1.5 - 2.5

Channel Morphology (Percent Reach Length)

Constrained		Unconstrained	
Hillslope	100	Single Channel	0
Bedrock	0	Multiple Channel	0
Terrace	0	Braided Channel	0
Alt. Terrace/Hill	0		
Landuse	0		

Channel Characteristics

Type	Length	Area	Dry Units
Primary	1,568	3,897	0
Secondary	0	0	0

Channel Dimensions

Wetted Surface		Active Channel		First Terrace	
Width	2.4	Width	4.1	Width	4.5
Depth	0.24	Height	0.5	Height	0.1
W:D	18.2				

Stream Flow Type: MF Water Temp: 9.2-10.3
Avg. Unit Gradient: 3.9 Habitat Units/100m: 4.2

Riparian, Bank, and Wood Summary

Land Use: LG/CC Riparian Veg.: DY/S

Bank Stability

Bank Class	Percent Reach Length
Non-Erodible	1.4
Vegetation Stabilized	94.9
Boulder-cobble	0.0
Actively Eroding	3.6

Undercut Banks
Unit Average: 10.15%

Open Sky (% of 180)
Unit Average: 17
Range: 0-78

Large Woody Debris

Average Complexity Score: 1.1

Pieces	29	Volume(m^3)	22
Pieces/100m	1.8	Volume/100m	1.4

OREGON DEPT. FISH AND WILDLIFE **DEMING CREEK**
HABITAT INVENTORY Report Date: 12/07/92 Survey Date: 07/02/92

REACH 1 **T36-R15E-16SW** **REACH 1**

HABITAT DETAIL

Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m^2)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area S/O	Snd	Grvl	Cbbl	Bldr	Bdrk
CASCADE/BOULDERS	2	83	2.5	0.25	241	25	0	5	40	18	25	13
CULVERT CROSSING	1	15	1.3	0.30	20	0	0	50	50	0	0	0
POOL-LATERAL SCOUR	23	172	2.5	0.33	421	23	1	24	46	23	7	0
POOL-PLUNGE	1	4	3.0	0.30	12	3	0	30	20	40	10	0
POOL-STRAIGHT SCOUR	5	35	2.8	0.30	101	4	6	16	32	27	9	10
RAPID/BOULDERS	13	732	2.5	0.19	1,878	223	0	8	31	35	23	3
RIFFLE	10	290	2.3	0.15	648	21	2	15	51	29	3	1
RIFFLE W/ POCKETS	4	234	2.6	0.23	570	43	0	15	41	29	16	0
STEP/BOULDERS	2	1	2.8	0.15	3	6	0	0	0	0	100	0
STEP/COBBLE	1	0	3.0	0.20	1	0	0	0	10	90	0	0
STEP/LOG	4	1	1.8	0.15	2	2	8	18	43	29	2	0
Total:	66	1,568	2.4	0.24	3,897	350	**Avg:** 2	16	40	27	13	2

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m^2)	Wetted Area Percent	Large Boulders Number	Large Boulders #/100m^2	Wood Class
Dammed & BW Pools	0	0	.	.	0	0.00	0	0.00	.
Scour Pools	29	211	2.5	0.32	534	13.69	30	5.62	1.1
Glides	0	0	.	.	0	0.00	0	0.00	.
Riffles	14	524	2.4	0.17	1218	31.26	64	5.25	1.0
Rapids	13	732	2.5	0.19	1878	48.19	223	11.87	1.0
Cascades	2	83	2.5	0.25	241	6.19	25	10.36	1.0
Step/Falls	7	3	2.2	0.16	6	0.15	8	140.35	1.6
Dry	0	0	.	.	0	0.00	0	0.00	.

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
Steep V-shape	0	Constraining Terraces	0
Moderate V-shape	100	Multiple Terraces	0
Open V-shape	0	Wide Floodplain	0

Valley Width Index average: 1.8 range: 1.5 - 2.0

Channel Morphology (Percent Reach Length)

Constrained		Unconstrained	
Hillslope	100	Single Channel	0
Bedrock	0	Multiple Channel	0
Terrace	0	Braided Channel	0
Alt. Terrace/Hill	0		
Landuse	0		

Channel Characteristics

Type	Length	Area	Dry Units
Primary	3,696	9,482	0
Secondary	30	37	0

Channel Dimensions

Wetted Surface		Active Channel		First Terrace	
Width	2.5	Width	4.5	Width	5.0
Depth	0.25	Height	0.4	Height	0.1
W:D	20.4				

Stream Flow Type: MF Water Temp: 10.8-10.8
Avg. Unit Gradient: 5.6 Habitat Units/100m: 4.7

Riparian, Bank, and Wood Summary

Land Use: LG/CC Riparian Veg.: DY/S

Bank Stability

Bank Class	Percent Reach Length
Non-Erodible	0.6
Vegetation Stabilized	99.4
Boulder-cobble	0.0
Actively Eroding	0.0

Undercut Banks
Unit Average: 4.02%

Open Sky (% of 180)
Unit Average: 6
Range: 0-64

Large Woody Debris

Average Complexity Score: 1.1

Pieces	120	Volume(m^3)	97
Pieces/100m	3.2	Volume/100m	2.6

OREGON DEPT. FISH AND WILDLIFE **DEMING CREEK**
HABITAT INVENTORY Report Date: 12/07/92 Survey Date: 07/07/92

REACH 2 **T36-R15E-16NE** **REACH 2**

HABITAT DETAIL

Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m^2)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area S/O	Snd	Grvl	Cbbl	Bldr	Bdrk
CASCADE/BEDROCK	1	10	3.0	0.20	31	5	0	0	0	0	30	70
CASCADE/BOULDERS	11	258	2.4	0.23	627	146	0	4	16	41	32	7
CULVERT CROSSING	1	15	1.5	0.20	23	0	0	0	0	0	0	100
POOL-DAMMED	1	10	2.0	0.20	21	0	0	20	40	40	0	0
POOL-LATERAL SCOUR	29	183	2.4	0.36	431	33	0	21	30	30	16	3
POOL-PLUNGE	15	67	3.0	0.44	203	26	1	17	25	29	21	6
POOL-STRAIGHT SCOUR	12	64	2.5	0.43	164	22	0	14	26	29	23	7
RAPID/BOULDERS	59	2,833	2.5	0.20	7,286	723	0	5	23	41	27	3
RIFFLE	13	238	2.6	0.15	633	22	0	11	40	39	9	1
RIFFLE W/ POCKETS	1	36	2.0	0.20	72	3	0	10	20	50	20	0
STEP/BEDROCK	1	0	0.8	0.20	0	0	0	0	0	0	0	100
STEP/BOULDERS	14	6	2.4	0.16	14	57	0	1	1	6	85	7
STEP/LOG	16	5	2.8	0.14	15	7	0	33	40	22	5	1
Total:	174	3,726	2.5	0.25	9,519	1044	**Avg:** 0	12	25	32	26	5

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m^2)	Wetted Area Percent	Large Boulders Number	Large Boulders #/100m^2	Wood Class
Dammed & BW Pools	1	10	2.0	0.20	21	0.22	0	0.00	1.0
Scour Pools	56	314	2.6	0.40	798	8.38	81	10.15	1.0
Glides	0	0	.	.	0	0.00	0	0.00	.
Riffles	14	274	2.6	0.15	705	7.40	25	3.55	1.0
Rapids	59	2,833	2.5	0.20	7286	76.54	723	9.92	1.0
Cascades	12	268	2.4	0.23	658	6.91	151	22.96	1.0
Step/Falls	31	11	2.5	0.15	29	0.31	64	218.43	1.4
Dry	0	0	.	.	0	0.00	0	0.00	.

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
Steep V-shape	0	Constraining Terraces	0
Moderate V-shape	100	Multiple Terraces	0
Open V-shape	0	Wide Floodplain	0

Valley Width Index average: 1.8 range: 1.5 - 2.5

Channel Morphology (Percent Reach Length)

Constrained		Unconstrained	
Hillslope	100	Single Channel	0
Bedrock	0	Multiple Channel	0
Terrace	0	Braided Channel	0
Alt. Terrace/Hill	0		
Landuse	0		

Channel Characteristics

Type	Length	Area	Dry Units
Primary	1,968	4,074	0
Secondary	105	142	0

Channel Dimensions

Wetted Surface		Active Channel		First Terrace	
Width	2.1	Width	4.1	Width	4.5
Depth	0.21	Height	0.3	Height	0.1
W:D	16.9				

Stream Flow Type: MF Water Temp: 8.0-8.0
Avg. Unit Gradient: 12.0 Habitat Units/100m: 6.3

Riparian, Bank, and Wood Summary

Land Use: LG/SG Riparian Veg.: CM/DY

Bank Stability

Bank Class	Percent Reach Length
Non-Erodible	1.2
Vegetation Stabilized	98.8
Boulder-cobble	0.0
Actively Eroding	0.0

Undercut Banks
Unit Average: 1.65%

Open Sky (% of 180)
Unit Average: 26
Range: 0-61

Large Woody Debris

Average Complexity Score:	1.1		
Pieces	173	Volume(m^3)	240
Pieces/100m	8.8	Volume/100m	12.2

REACH 3 T36-R15E-11NE REACH 3

HABITAT DETAIL

Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m^2)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area S/O	Snd	Grvl	Cbbl	Bldr	Bdrk
CASCADE/BEDROCK	1	18	1.5	0.20	26	3	0	0	10	10	10	70
CASCADE/BOULDERS	32	866	1.9	0.20	1,559	332	1	8	21	37	29	5
CULVERT CROSSING	2	21	0.8	0.10	16	0	0	0	0	0	0	100
POOL-BACKWATER	1	2	1.5	0.20	3	0	80	20	0	0	0	0
POOL-DAMMED	1	5	1.5	0.20	8	0	25	50	25	0	0	0
POOL-LATERAL SCOUR	6	28	1.9	0.33	54	7	6	21	30	29	9	5
POOL-PLUNGE	8	33	2.2	0.43	73	17	4	16	32	21	20	6
POOL-STRAIGHT SCOUR	6	24	2.2	0.30	53	12	11	23	23	20	21	3
RAPID/BEDROCK	2	38	2.5	0.20	95	11	0	7	7	5	14	67
RAPID/BOULDERS	28	960	2.1	0.20	2,171	266	1	12	27	40	20	0
RIFFLE	4	33	2.1	0.13	68	5	5	10	50	28	8	0
RIFFLE W/ POCKETS	3	33	1.7	0.13	57	3	0	20	47	30	3	0
STEP/BEDROCK	3	2	2.8	0.17	5	1	0	0	0	0	0	100
STEP/BOULDERS	6	3	1.8	0.18	5	28	0	0	0	0	100	0
STEP/COBBLE	2	1	1.3	0.10	1	0	0	0	0	100	0	0
STEP/LOG	25	8	2.6	0.15	22	19	3	27	42	25	3	0
Total:	130	2,073	2.1	0.21	4,216	704	**Avg:** 3	14	26	29	20	7

HABITAT SUMMARY

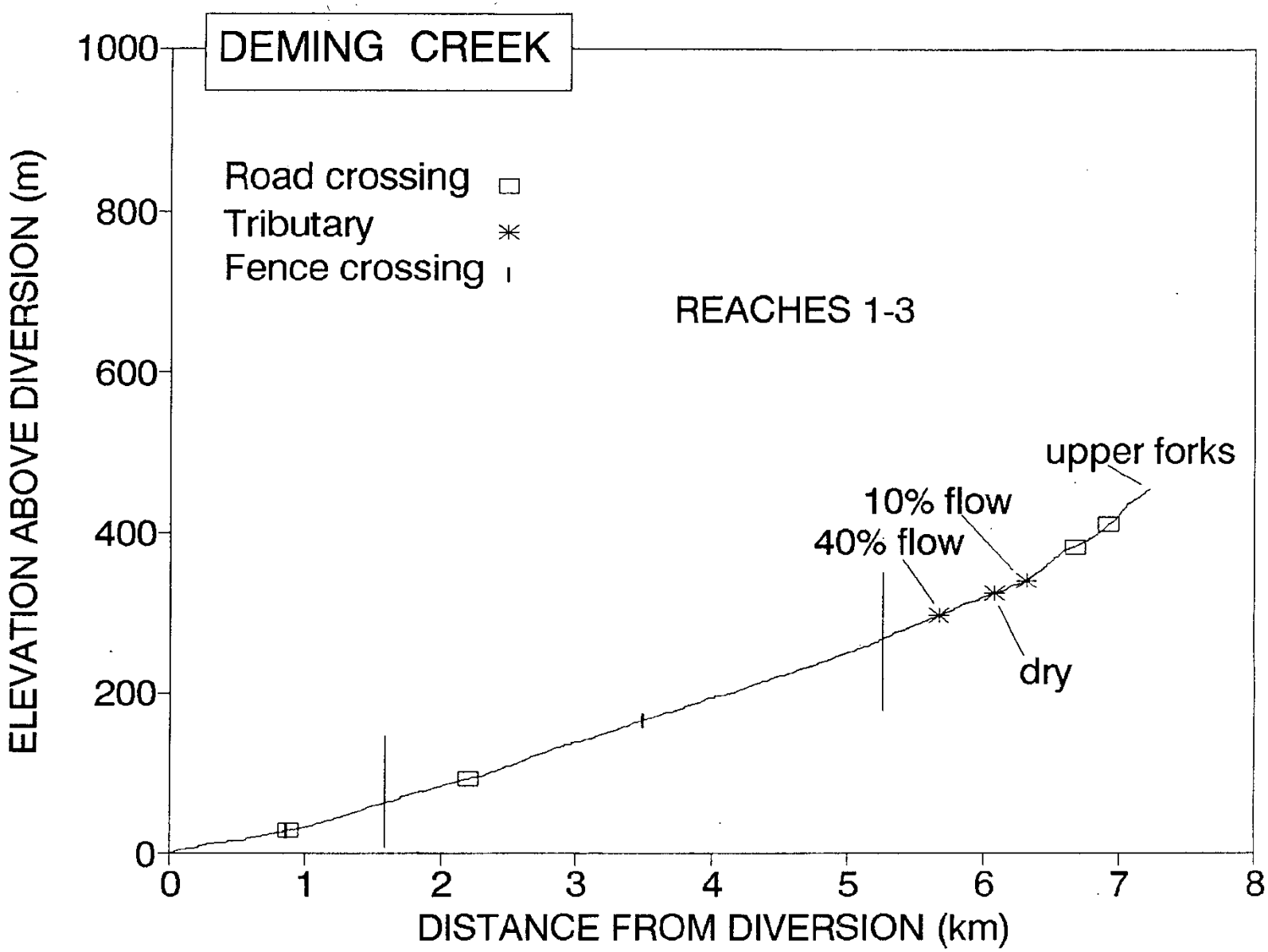
Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m^2)	Wetted Area Percent	Large Boulders Number	Large Boulders #/100m^2	Wood Class
Dammed & BW Pools	2	7	1.5	0.20	11	0.26	0	0.00	1.0
Scour Pools	20	85	2.1	0.36	179	4.26	36	20.07	1.0
Glides	0	0	.	.	0	0.00	0	0.00	.
Riffles	7	66	1.9	0.13	125	2.95	8	6.43	1.0
Rapids	30	998	2.2	0.20	2266	53.75	277	12.22	1.0
Cascades	33	884	1.8	0.20	1585	37.60	335	21.13	1.2
Step/Falls	36	13	2.4	0.16	34	0.80	48	142.86	1.2
Dry	0	0	.	.	0	0.00	0	0.00	.

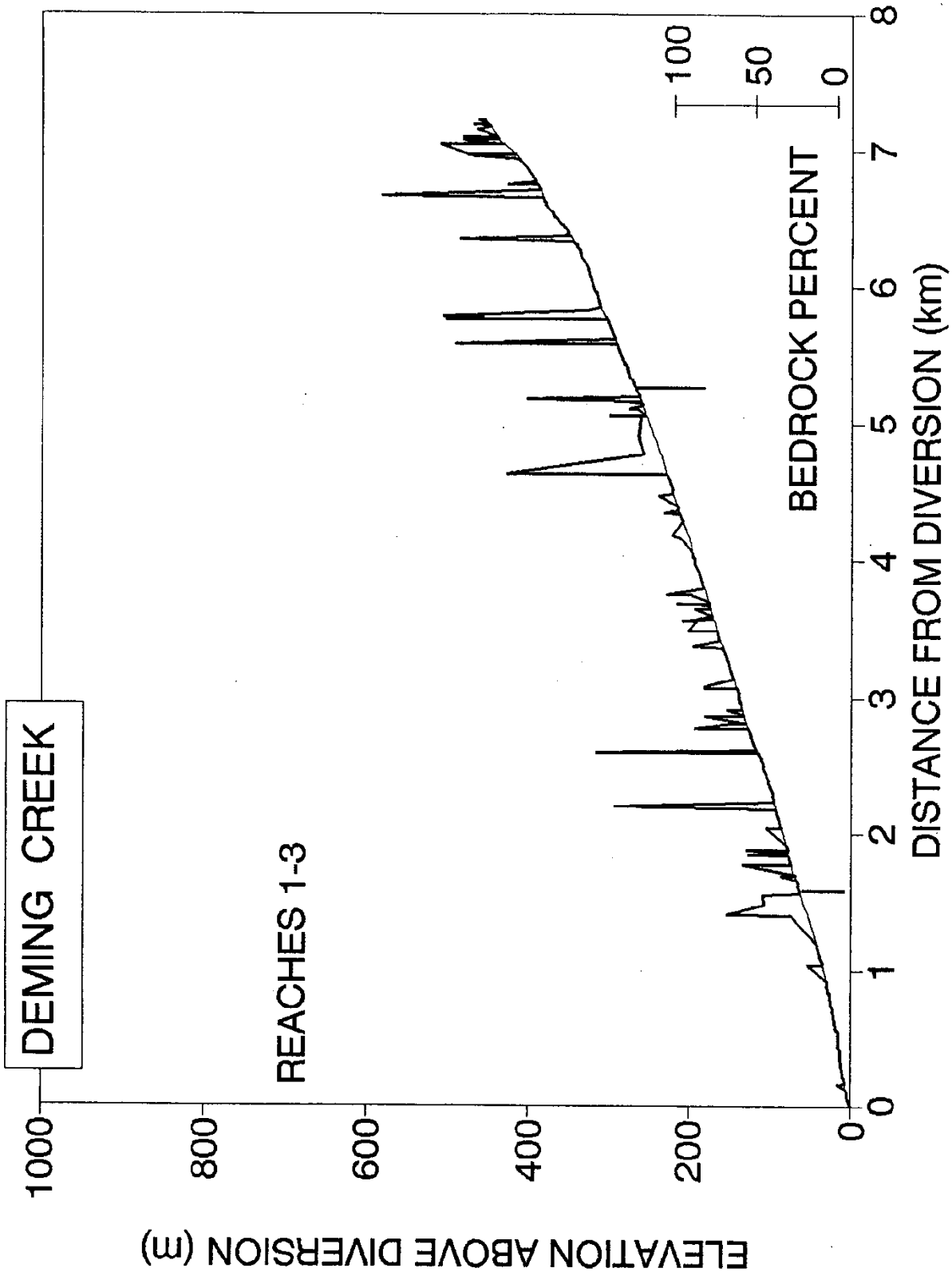
STREAM SUMMARY **DEMING CREEK**

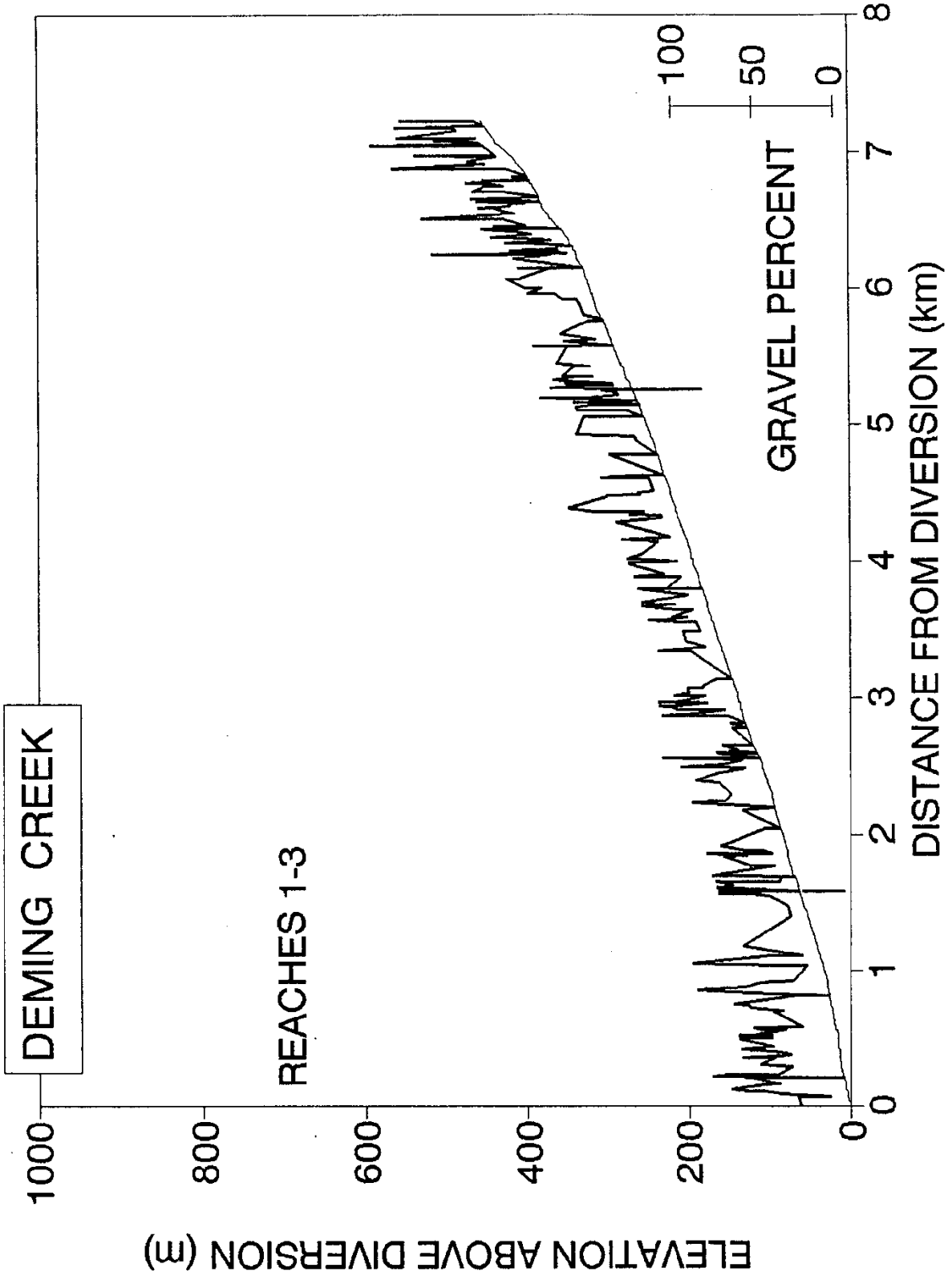
Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m^2)	Substrate Percent Wetted Area S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	Total Large Boulder
370	7,367	2.4	0.23	17,632	1	14	28	30	21	5	2,098

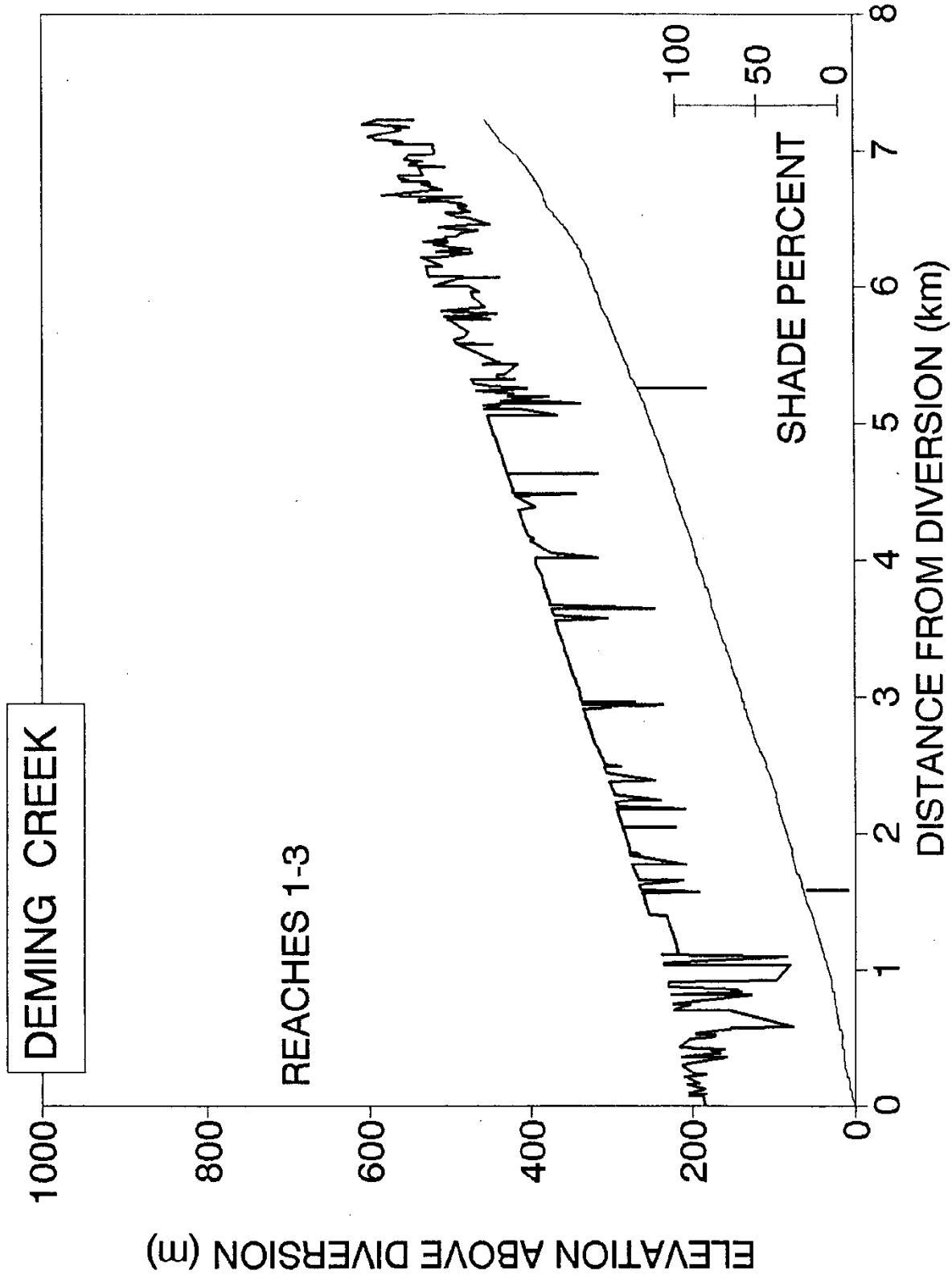
Wetted Area

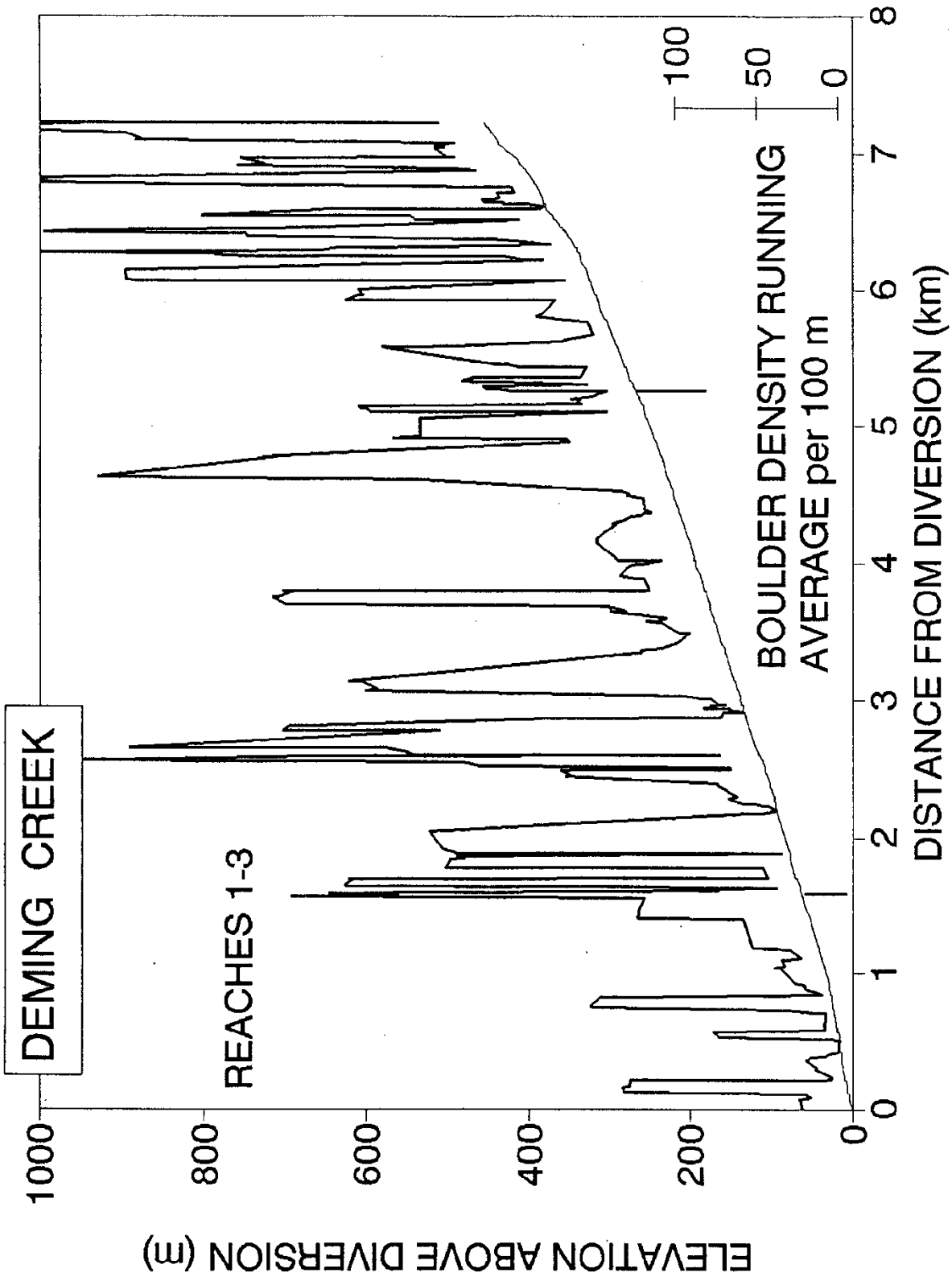
Habitat Group	(m^2)	Percent
Scour Pool	1,511	8.6
Backwater Pools	32	0.2
Glide	0	0.0
Riffle	2,047	11.6
Rapid	11,430	64.8
Cascade	2,484	14.1
Step	69	0.4
Dry	0	0.0

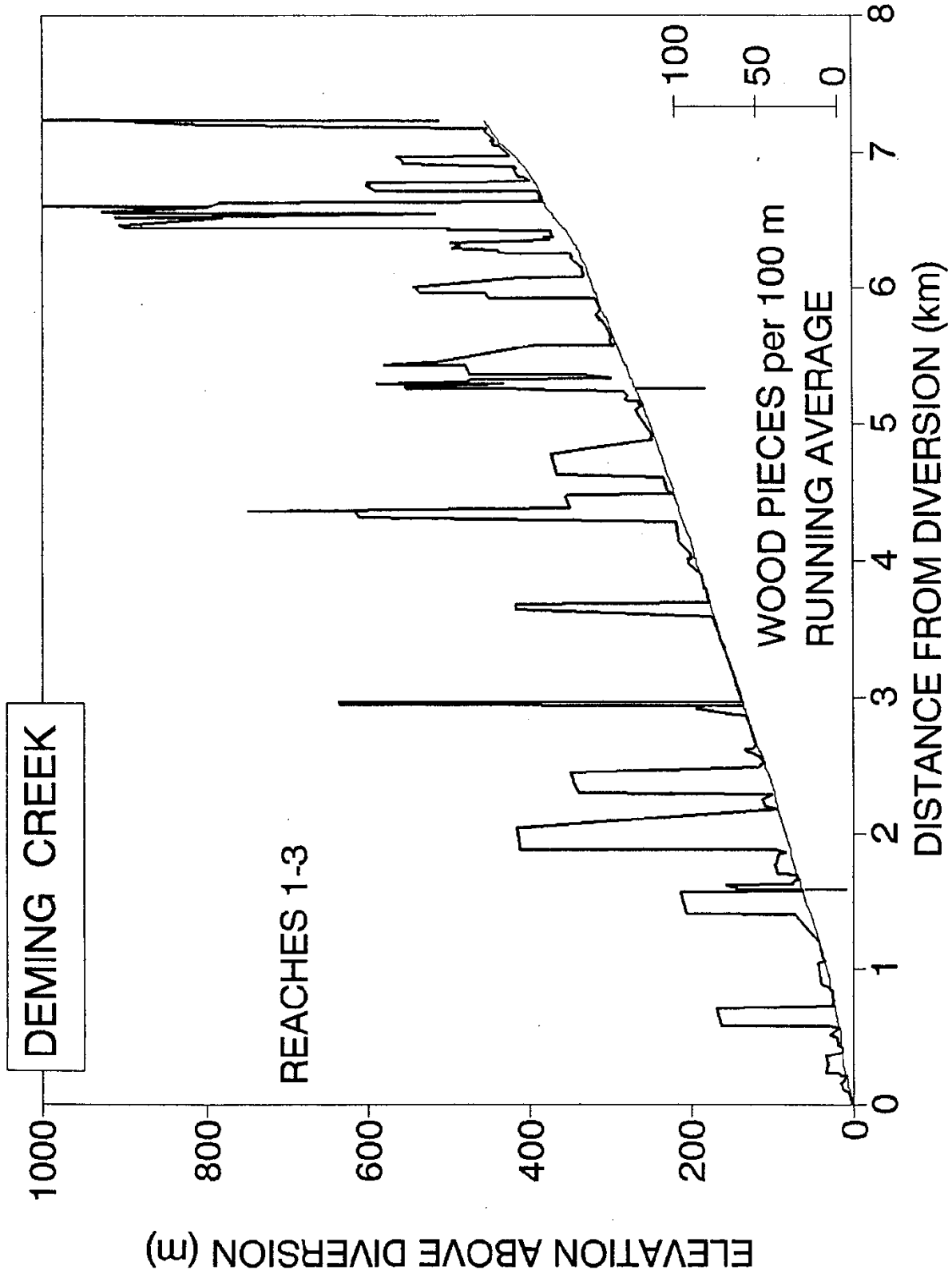

DEMING CREEK
Road crossing
Tributary
Fence crossing
REACHES 1-3
upper forks
10% flow
40% flow
dry
ELEVATION ABOVE DIVERSION (m)
1000
800
600
400
200
0
0
1
2
3
4
5
6
7
8
DISTANCE FROM DIVERSION (km)

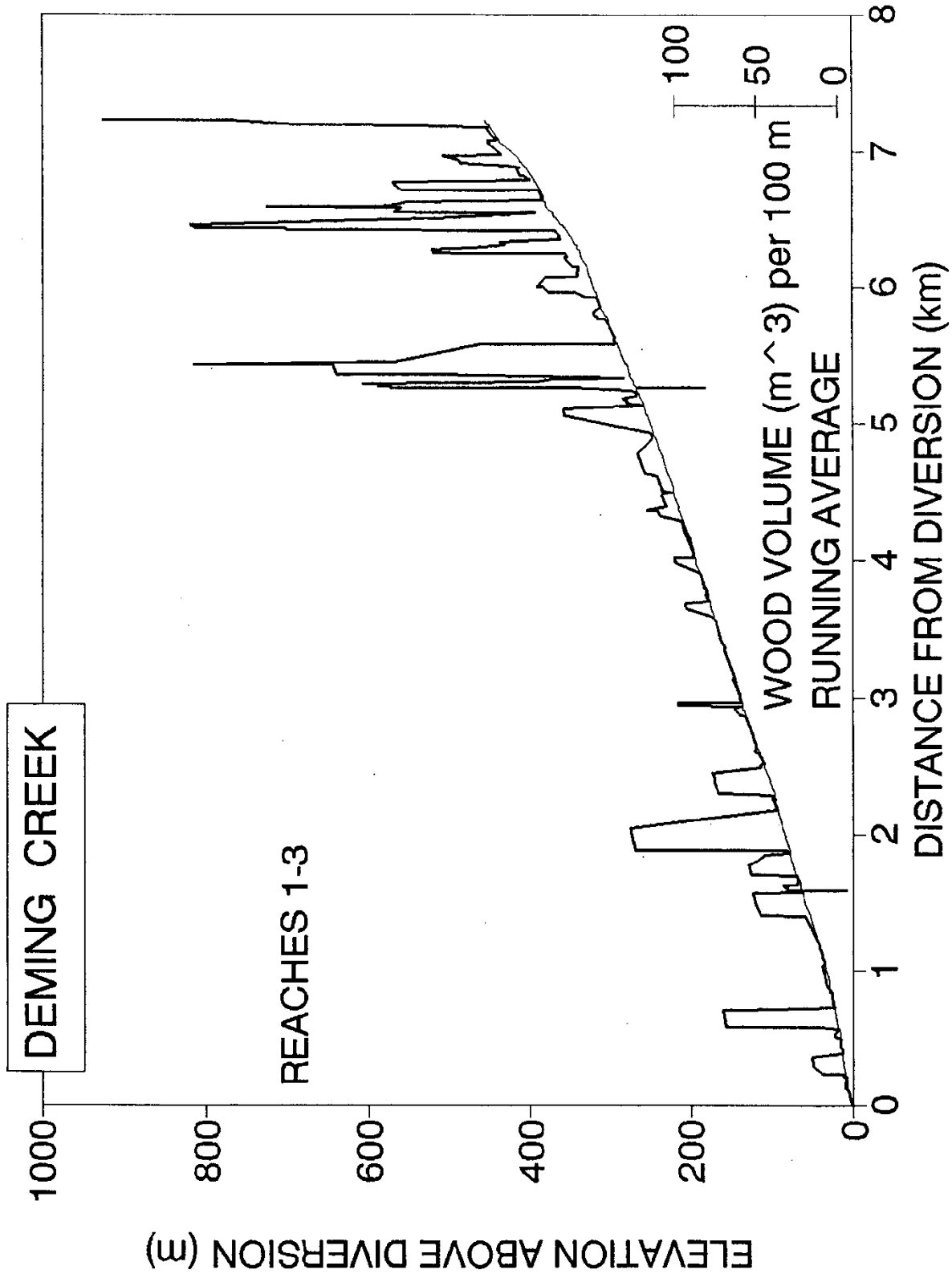

DEMING CREEK
REACHES 1-3
ELEVATION ABOVE DIVERSION (m)
1000
800
600
400
200
0
0
1
2
3
4
5
6
7
8
DISTANCE FROM DIVERSION (km)
BEDROCK PERCENT
100
50
0


DEMING CREEK
REACHES 1-3
ELEVATION ABOVE DIVERSION (m)
1000
800
600
400
200
0
0
1
2
3
4
5
6
7
8
DISTANCE FROM DIVERSION (km)
GRAVEL PERCENT
100
50
0

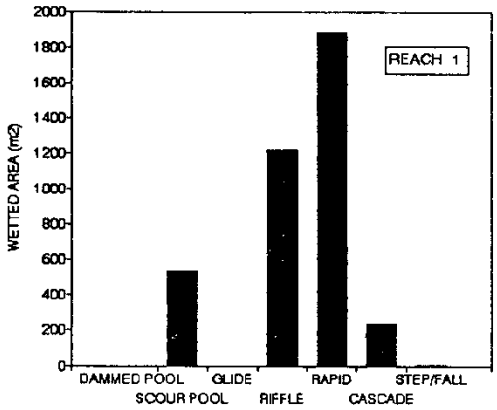

DEMING CREEK
REACHES 1-3
ELEVATION ABOVE DIVERSION (m)
1000
800
600
400
200
0
0
1
2
3
4
5
6
7
8
DISTANCE FROM DIVERSION (km)
SHADE PERCENT
100
50
0

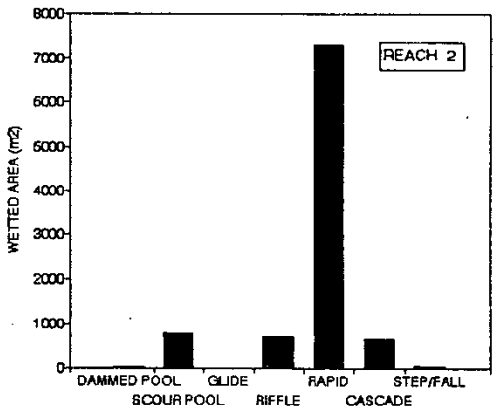

DEMING CREEK
REACHES 1-3
BOULDER DENSITY RUNNING
AVERAGE per 100 m
100
50
0
ELEVATION ABOVE DIVERSION (m)
1000
800
600
400
200
0
0
1
2
3
4
5
6
7
8
DISTANCE FROM DIVERSION (km)

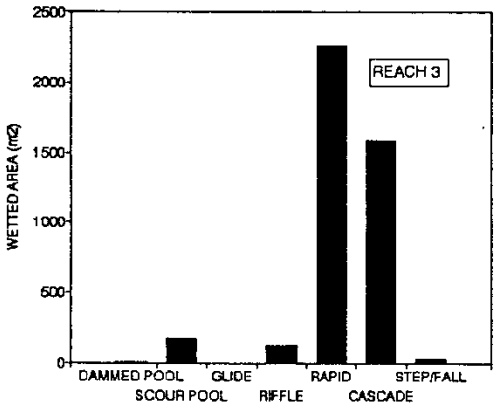

DEMING CREEK
REACHES 1-3
WOOD PIECES per 100 m
RUNNING AVERAGE
100
50
0
ELEVATION ABOVE DIVERSION (m)
1000
800
600
400
200
0
0
1
2
3
4
5
6
7
8
DISTANCE FROM DIVERSION (km)


DEMING CREEK
REACHES 1-3
ELEVATION ABOVE DIVERSION (m)
1000
800
600
400
200
0
0
1
2
3
4
5
6
7
8
DISTANCE FROM DIVERSION (km)
WOOD VOLUME (m^3) per 100 m
RUNNING AVERAGE
100
50
0

DEMING CREEK: HABITAT DISTRIBUTION



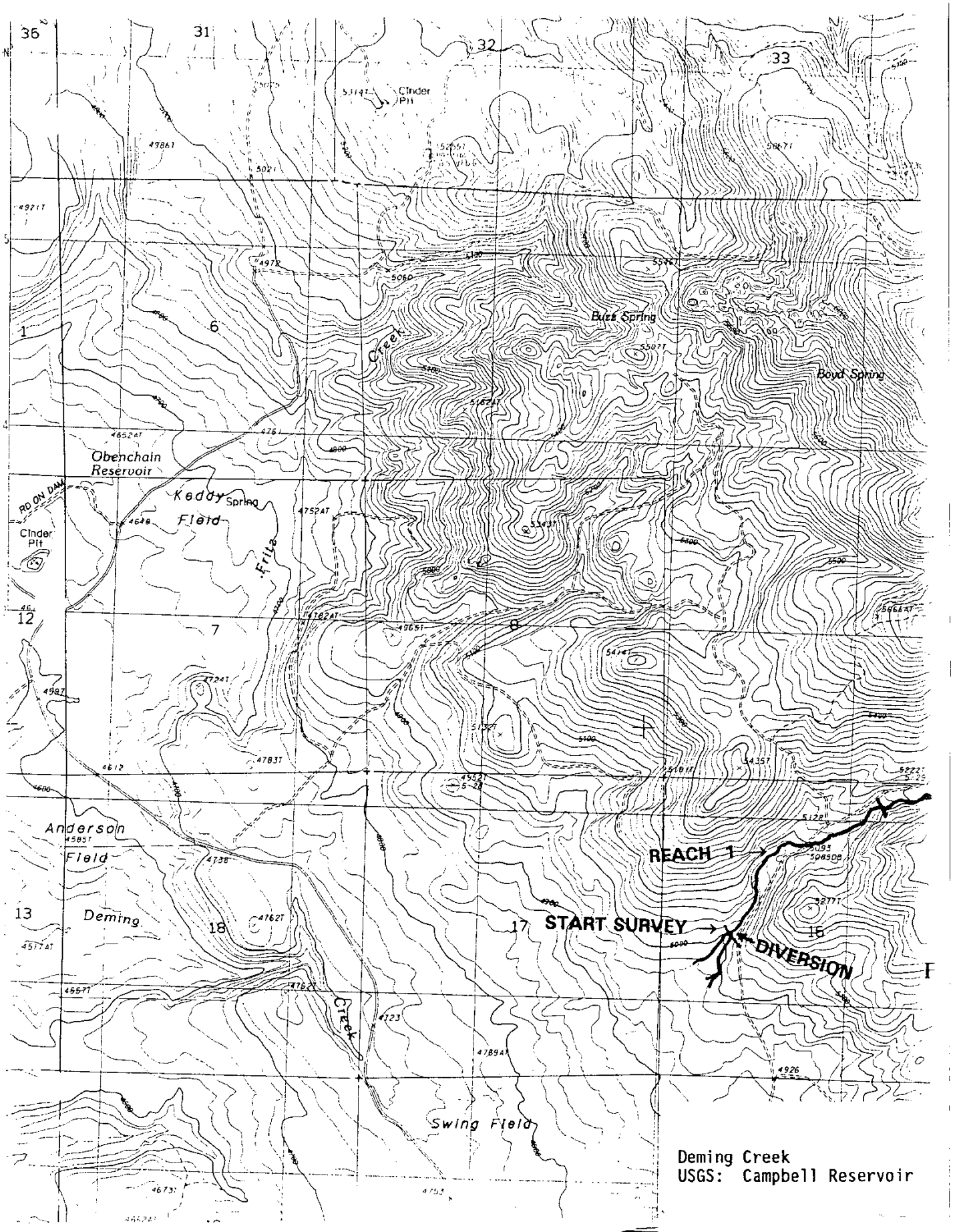


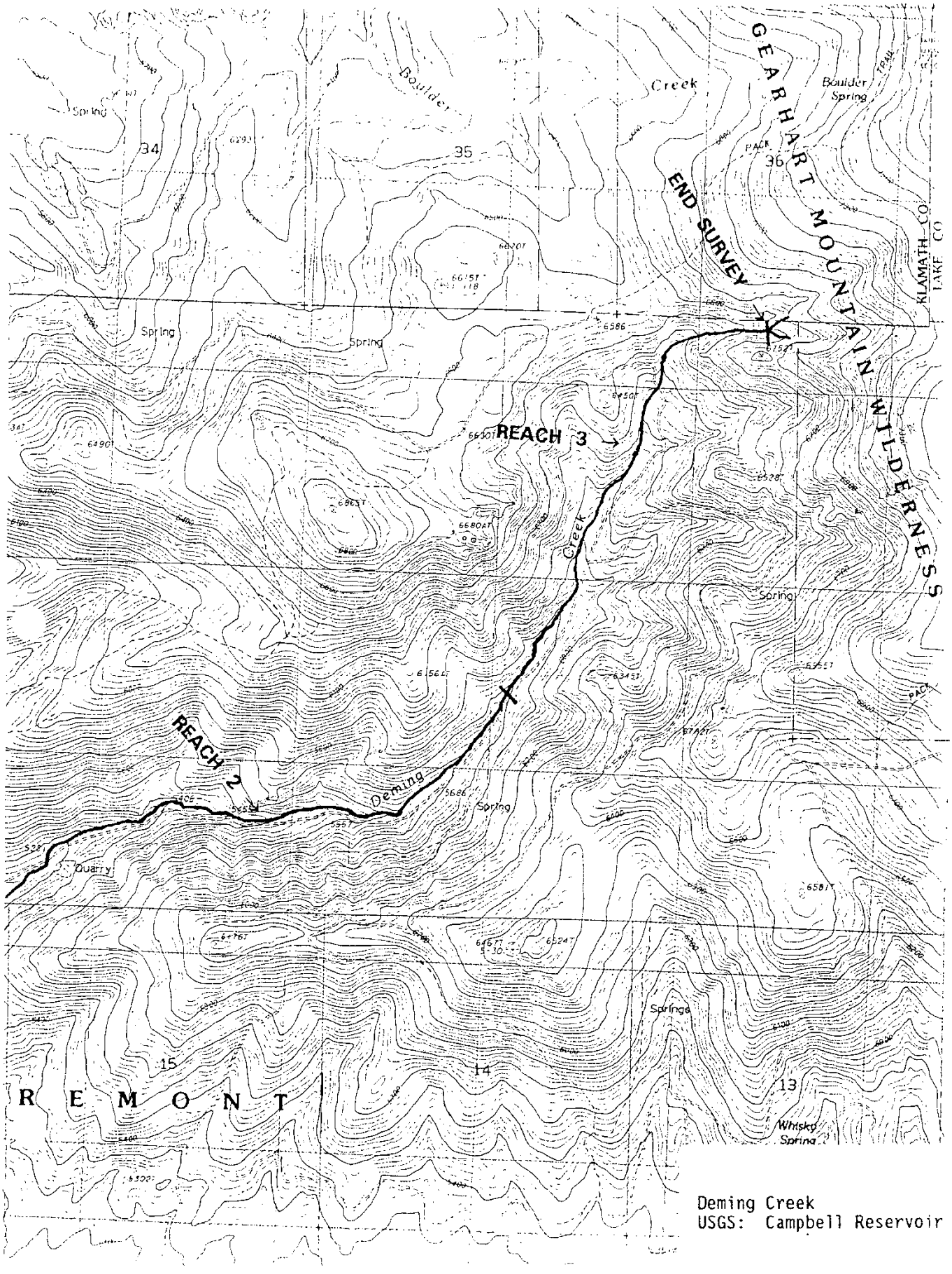


UNIT	TYPE	DISTANCE	CODE	NOTE_1	NOTE_2
1	RB	75			BEGAN AT DIVERSION
4	SP	99		14" REDBAND	REDBAND
7	CB	129			COW TRAMPLE
11	SB	210		.3M DROP	.3M DROP
29	LP	525		LUMPED TWO POOLS INTO ONE	
32	RB	573			COW TRAMPLE
33	SL	573		.4M DROP	.4M DROP
36	LP	593			RAINBOW TROUT
39	SL	714		.3M DROP	.3M DROP
45	SB	826		.3M DROP	.3M DROP
46	LP	841		LUMPED THREE SM POOLS TOGETHER	
47	SL	841		.4M DROP	.4M DROP
48	RB	867			FENCE CROSSING
49	CC	882			CULVERT =1.25M WIDE
58	SC	1119		.6M DROP	.6M DROP
65	LP	1568		INCLUDES SM ISLAND	
66	SL	1568		.3M DROP	.3M DROP
67	LP	1576	BV		
68	RB	1594		BV	
69	SB	1594		.4M DROP	.4M HIGH
71	SL	1611			.3M DROP
73	SL	1620		.2M DROP	.2M DROP
79	SB	1695		.4M DROP	.4M DROP
81	SL	1703		.4M DROP	.4M DROP
87	SB	1867			.3M DROP
88	RB	1883		.3M DROP	
91	RB	2042		WATER GAGE READS .6 @14:30	
93	SB	2047		.4M DROP	.4M DROP
96	CC	2197			CC WIDTH =1.5M
98	SL	2227	BV	.4M DROP	.4M DROP
100	LP	2247			ERODED FOOT BC
106	SL	2445		.4M DROP	.4M DROP
109	SB	ERR		.3M DROP	.3M DROP
113	SL	2489		.3M DROP	.3M DROP
121	SB	2560		.5M DROP T=9.2C @09:00	.5M DROP
123	SB	2589		.4M DROP	.4M DROP
125	SR	2597		.4M DROP	.4M DROP
129	SB	2656		.5M DROP	.5M DROP
133	SB	2805		.4M DROP	.4M DROP
135	SL	2861		.2M DROP	.2M DROP
139	SL	2911		.6M DROP	.6M DROP
143	SL	2935		.3M DROP	.3M DROP
148	SL	2963		.5M DROP	.5M DROP
151	LP	3012		T=10.3C @11:15	
154	RB	3069	BV		
156	CB	3086	VI		
158	SB	3139		.4M DROP	.4M DROP
159	RB	3347	VI	VI	
160	SL	3348		.4M DROP	.4M DROP
164	RB	3491		FENCE CROSSING	
169	PP	3580	BV		
176	SL	3688		.4M DROP	.4M DROP
181	SB	3801		.4M DROP	.4M DROP

UNIT	TYPE	DISTANCE	CODE	NOTE_1	NOTE_2
192	SL	4027		.5M DROP	.5M DROP
200	RB	4344			BT
201	PP	4348		9-10" BULLTROUT	
203	SL	4374		.4M DROP DIAGONAL	.4M DROP
204	RI	4392		7" BULLTROUT	
205	RB	4481		TROUT (SEVERAL) VI-SMALL	
206	PP	4485			.5M DROP
207	SL	4485		.5M DROP	
212	RB	4610		DRY 2ND CHANNEL TO LEFT	
217	RB	4785		SM VI	
218	SL	4785		.6M DROP	.6M DROP
219	RB	4889	VI	VI (ABOUT 10M LONG)	
220	CB	4912		STEP-POOL ARRANGEMENT	
222	LP	4927		9" BULLTROUT	
223	RB	5064	VI	VI	
225	SB	5068		.6M DROP	.6M DROP
226	RB	5108		T=7.2C @08:30	
231	SB	5150		.5M DROP	.5M DROP
241	SC	5264		T=7.7 @09:45 .4M DROP	.4M DROP
243	SL	5277		.4M DROP	.4M DROP
245	SL	5296		.4M DROP	.4M DROP
249	SL	5332		.7M DROP	.7M DROP
252	SL	5357		.3M DROP	.3M DROP
255	SL	5431		.6M DROP	.6M DROP
256	RB	5455	VI	VI	
257	SL	5455		.3M DROP	.3M DROP
258	RB	5575		.8M DROP	
259	SL	5575			.8M DROP
262	SR	5586		.4M DROP	.4M DROP
265	CB	5673	TJ RIGHT	/TJ 40% FLOW VI	/TJ 1M WIDE 40% FLOW
267	CC	ERR		1M DIAMETER	1M WIDE CULVERT
269	SR	5768		.5M DROP	.5M DROP
271	SR	5787		T=8C @11:00 .8M DROP	.8M DROP
279	RB	6011		LUMPED SM STEP	
280	SL	6011		.5M DROP	.5M DROP
281	RB	6074		OLD ROAD XING	
282	SL	6075		.6M DROP	.6M DROP
283	RP	6089	TJ LEFT	TJ/ DRY	
286	SB	6158			.4M DROP
290	SL	6251		.2M DROP	.2M DROP
294	SL	6281		.8M DROP	.8M DROP
296	RB	6312	TJ LEFT	/TJ 10% FLOW	
298	SL	ERR		.4M DROP	.4M DROP
299	SB	6313		1M DROP	1M DROP
303	RB	6376	BV		
306	RB	6422		SM TROUT	
308	PP	6440		SM TROUT	
309	SB	6440		.9M DROP	.9M DROP
310	CB	6466		SERIES OF SM POOLS+STEPS	
311	SL	6466		.6M DROP	.6M DROP
312	CB	6517		GOOD MINI POOLS	
313	SL	6517		.7M DROP	.7M DROP
317	SL	6556		.7M DROP	.7M DROP

UNIT	TYPE	DISTANCE	CODE	NOTE_1	NOTE_2
319	SL	6593		.6M DROP	.6M DROP
324	SL	6628		.5M DROP	.5M DROP
325	RI	6639		2 TROUT	
326	SC	6639		.6M DROP	.6M DROP
328	PP	6666		2 BULLTROUT	
329	CC	6674		1M DIAMETER	1M DIAMETER
331	LP	6714		T=12.8C @14:15 8" BULLTROUT	
335	CB	6780			1M DROP
336	SL	6780		1M DROP	
337	DP	6785		6" BULLTROUT	
338	RB	6795		BULLTROUT	
339	SB	6796		.4M DROP	.4M DROP
341	SB	6819		.8M DROP	.8M DROP
343	SL	6886		.6M DROP	.6M DROP
346	RB	6928			ROAD CROSSING
348	CB	6968		SEVERAL GOOD POCKET POOLS	
349	SL	6968		.6M DROP	.6M DROP
353	SL	7047		.7M DROP	.7M DROP
357	LP	7077		8" BULLTROUT	
358	PP	7081		SM STEP BETWEEN 357+358	
361	CB	7153		T=12.7 @15:20	
363	SL	7172		.3M DROP	.3M DROP
366	SP	7193		TROUT	
367	SB	7194		1.25M DROP	1.25M DROP
368	CB	7225		COUPLE OF TROUT	
369	SL	7225		.8M DROP	.8M DROP
370	RB	7232		ENDS @ CONFL 70%=RT,30%=LF	/TJ 50% FLOW


36
31
32
33
Cinder Pit
Buzz Spring
Boyd Spring
Obenchain Reservoir
Keddy Spring
Field
Cinder Pit
Anderson Field
Deming
Swing Field
REACH 1
START SURVEY
DIVERSION
Deming Creek
USGS: Campbell Reservoir



Deming Creek
USGS: Campbell Reservoir

Deming Creek - Reach 1 - Unit 1. Rapid over boulders.

Deming Creek - Reach 2 - Unit 67. Lateral scour pool.

Deming Creek - Reach 3 - Unit 241. Step over cobble.