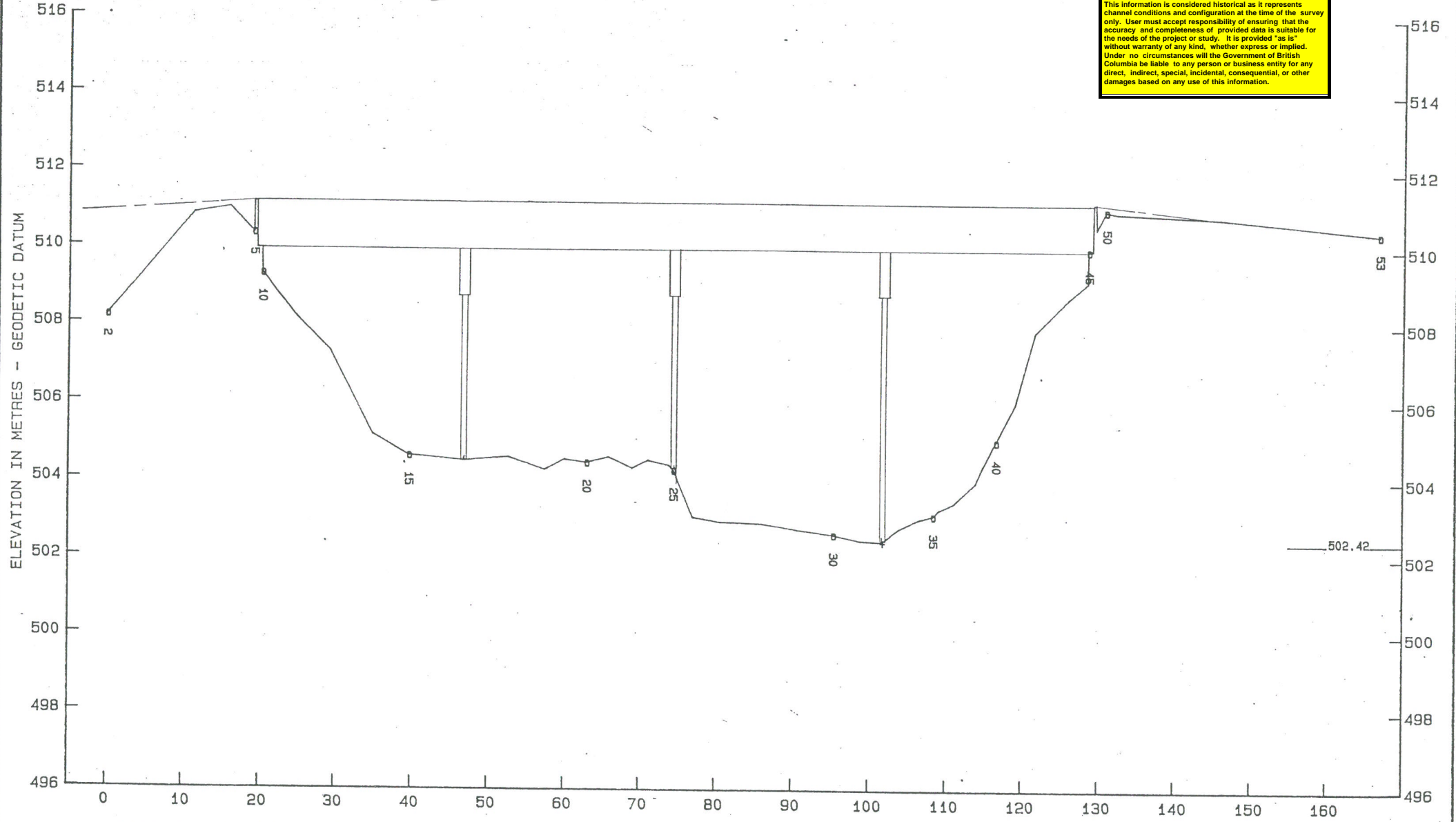


KETTLE RIVER-WEST Cross Section 27 (U/S CASCADE FALLS)

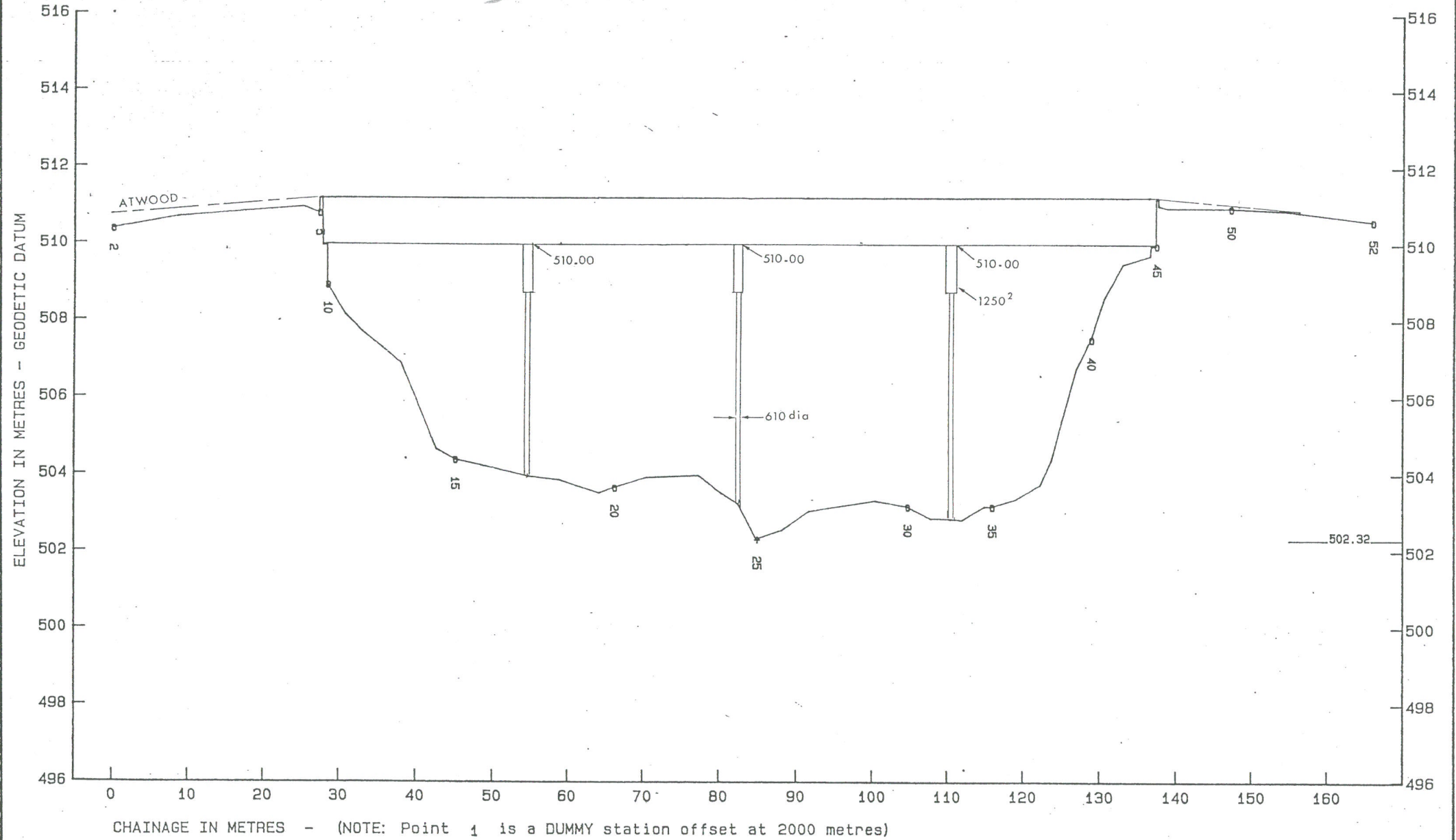
NOTE:
 This information is considered historical as it represents channel conditions and configuration at the time of the survey only. User must accept responsibility of ensuring that the accuracy and completeness of provided data is suitable for the needs of the project or study. It is provided "as is" without warranty of any kind, whether express or implied. Under no circumstances will the Government of British Columbia be liable to any person or business entity for any direct, indirect, special, incidental, consequential, or other damages based on any use of this information.



CHAINAGE IN METRES - (NOTE: Point 1 is a DUMMY station offset at 2000 metres)

PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	REDUCED	
	SURVEY DATE: SEPT1990		

KETTLE RIVER-WEST Cross Section 28 (U/S CASCADE FALLS)

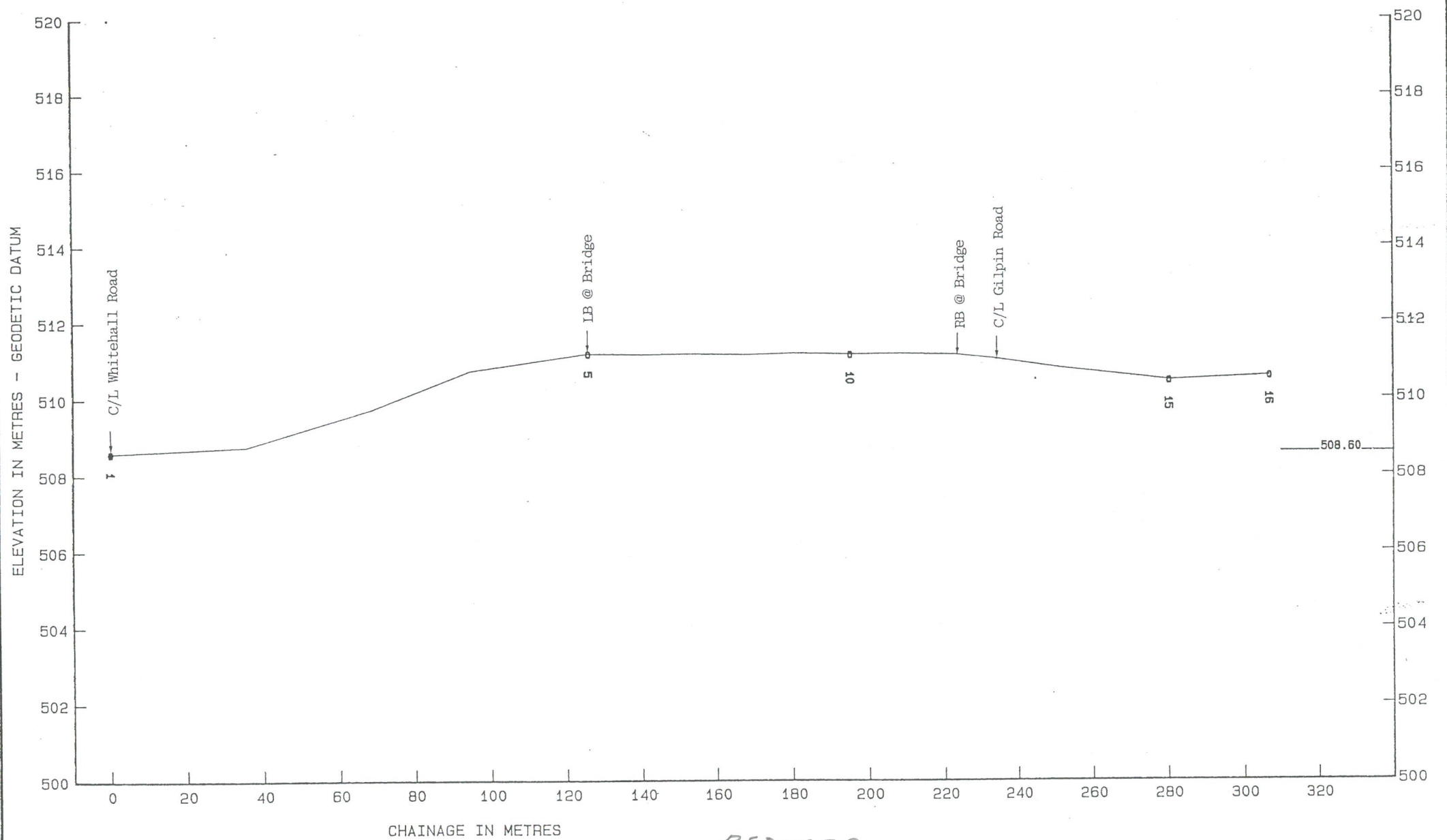


PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	SCALE
	SURVEY DATE: SEPT1990	H = 1:500 1:100

REDUCED

STATIONS	DISTANCE	CHAINAGE	ELEV	NO.	NAME OR REMARKS
306 406		0.00	509.61	1	CL-ATWOOD-WHAL
	35.80				
305 405		35.80	508.76	2	CL-ATWOOD
	32.64				
304 404		68.44	509.72	3	CL-ATWOOD
	26.41				
303 403		94.84	510.73	4	CL-ATWOOD
	30.98				
302 402		125.82	511.17	5	CL-BRG. END. LB
	14.45				
301 401		140.27	511.15	6	CL-BRG. X-BEAM
	12.01				
300 400		152.28	511.16	7	CL-BRG
	15.47				
299 399		167.76	511.13	8	CL-BRG-X-BEAM
	12.94				
298 398		180.69	511.17	9	CL-BRG-
	14.62				
297 397		195.31	511.15	10	CL-BRG-X-BEAM
	11.90				
296 396		207.21	511.16	11	CL-BRGE
	15.68				
295 395		222.89	511.13	12	CL-END. BR. RB
	11.06				
294 394		233.95	511.03	13	CL. ATWOOD-GLPN
	18.42				
293 393		252.37	510.76	14	CL. ATWOOD
	27.98				
292 392		280.35	510.45	15	CL. ATWOOD
	26.53				
291 391		306.88	510.58	16	CL. ATWOOD. NG
JOIN 291-292	N62 47 04W		26.528		
JOIN 292-293	N52 34 38W		27.976		
JOIN 293-294	N49 16 20W		18.423		
JOIN 294-295	N46 44 41W		11.063		
JOIN 295-296	N47 00 12W		15.679		
JOIN 296-297	N48 14 01W		11.896		
JOIN 297-298	N47 31 45W		14.616		
JOIN 298-299	N46 46 21W		12.940		
JOIN 299-300	N49 13 33W		15.472		
JOIN 300-301	N47 39 15W		12.011		
JOIN 301-302	N49 10 00W		14.455		
JOIN 302-303	N55 35 04W		30.975		
JOIN 303-304	N79 55 25W		26.405		
JOIN 304-305	N85 38 11W		32.637		
JOIN 305-306	N84 25 57W		35.800		

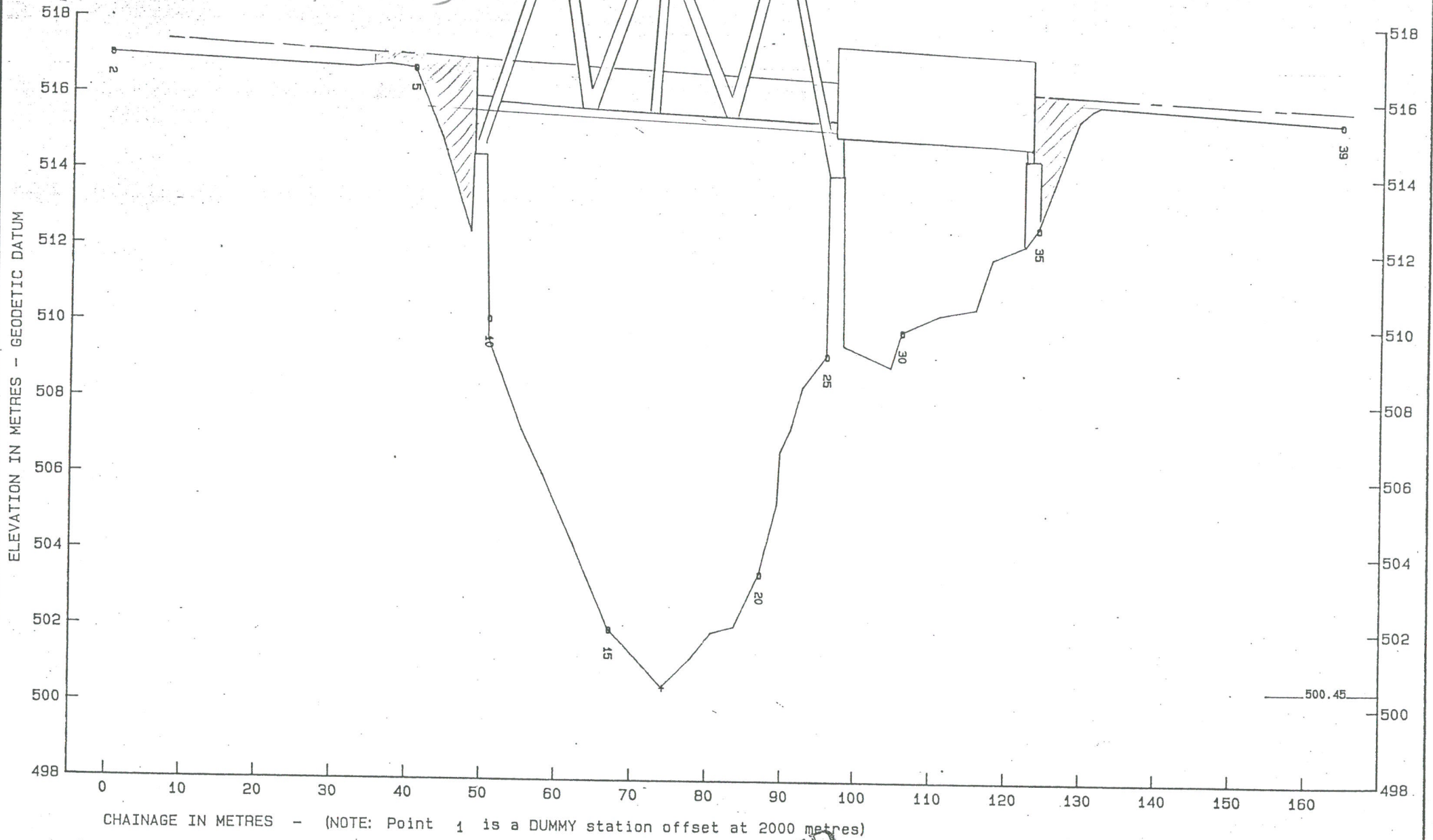
KETTLE RIVER Centreline Profile - Atwood Road AT XS 27/28



PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	SCALE	
	SURVEY DATE: SEPT1990	H = 1: 1000	V = 1: 100

KETTLE RIVER-WEST (U/S CASCADE FALLS)

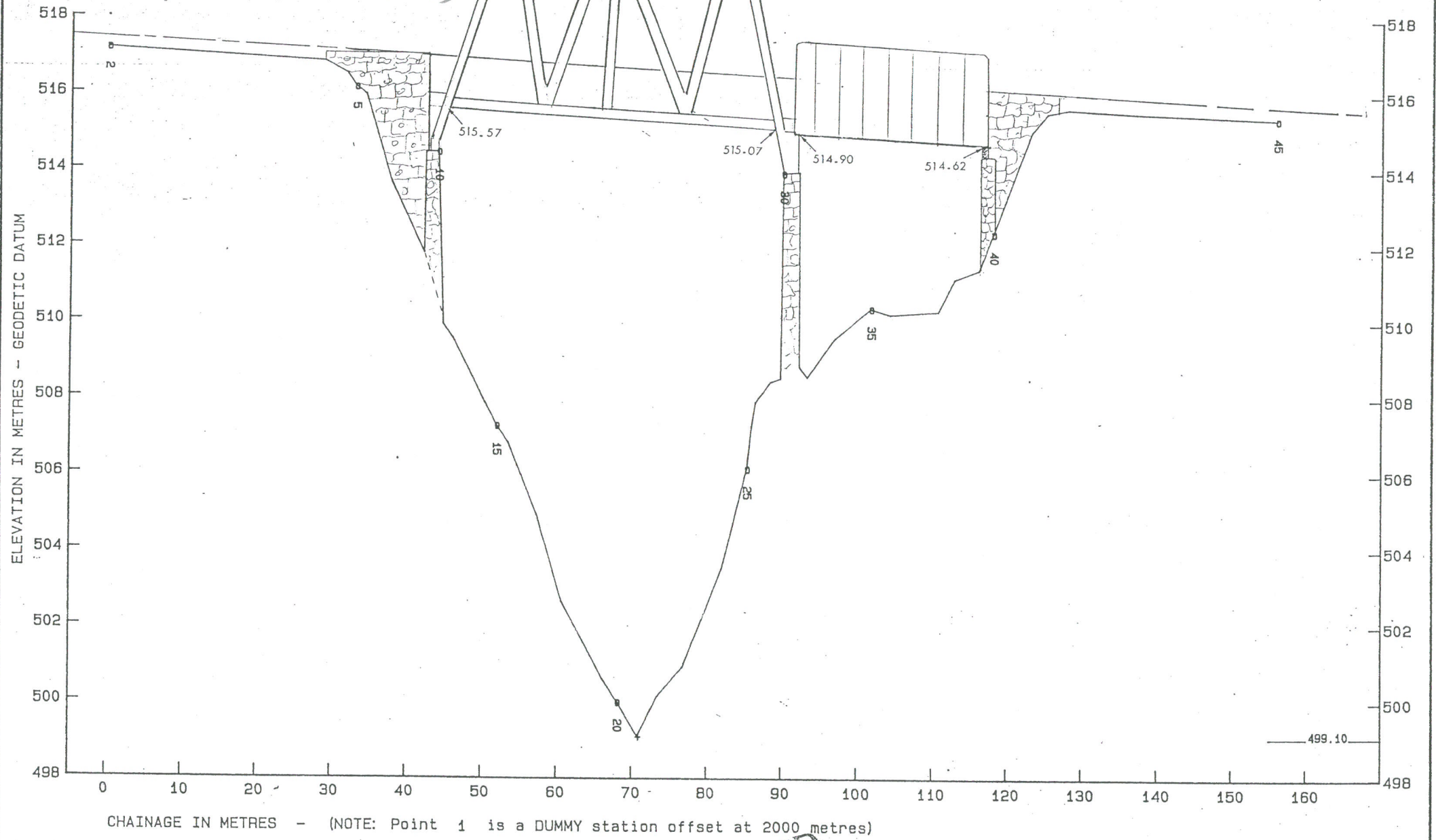
Cross Section 34



PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055 SURVEY DATE: SEPT1990	H = 1:500 V = 1:100
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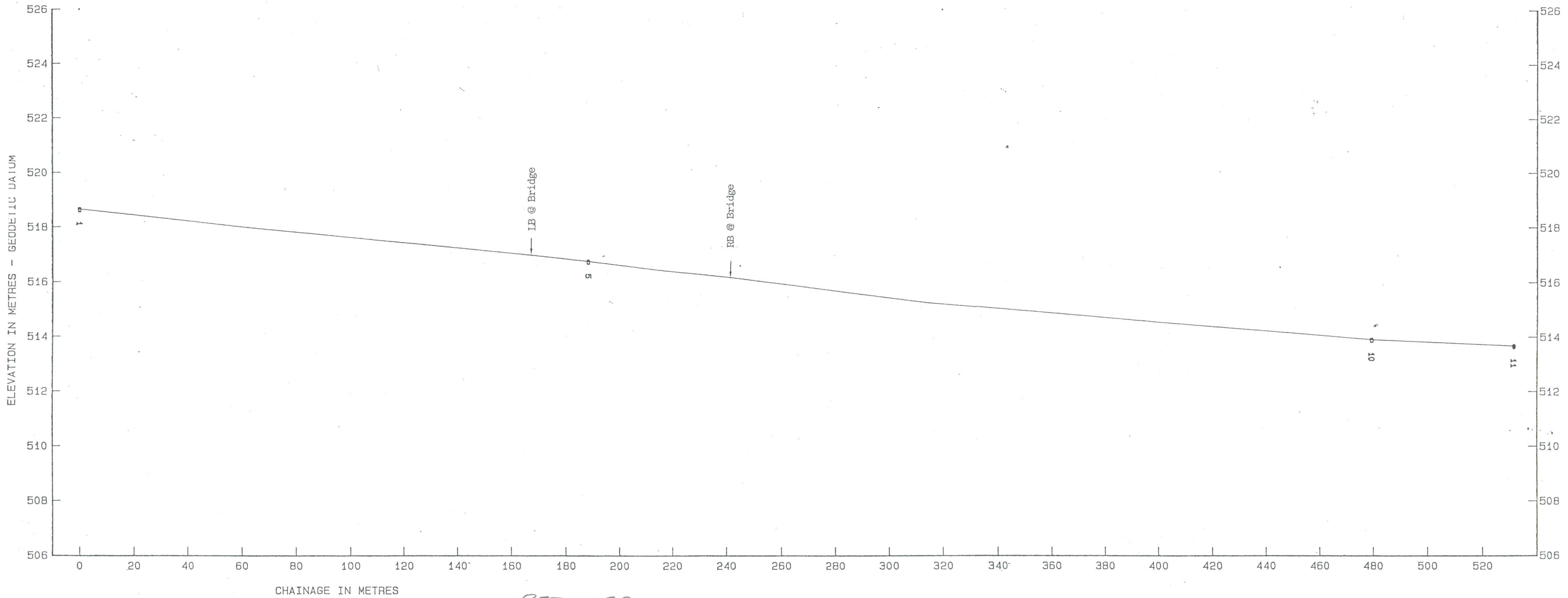
REDUCED

KETTLE RIVER-WEST (U/S CASCADE FALLS) Cross Section 35



PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	REDUCED SCALE
	SURVEY DATE: SEPT1990	

KETTLE RIVER Centreline Profile - CPR Bridge *AT XS 34/35*



REDUCED

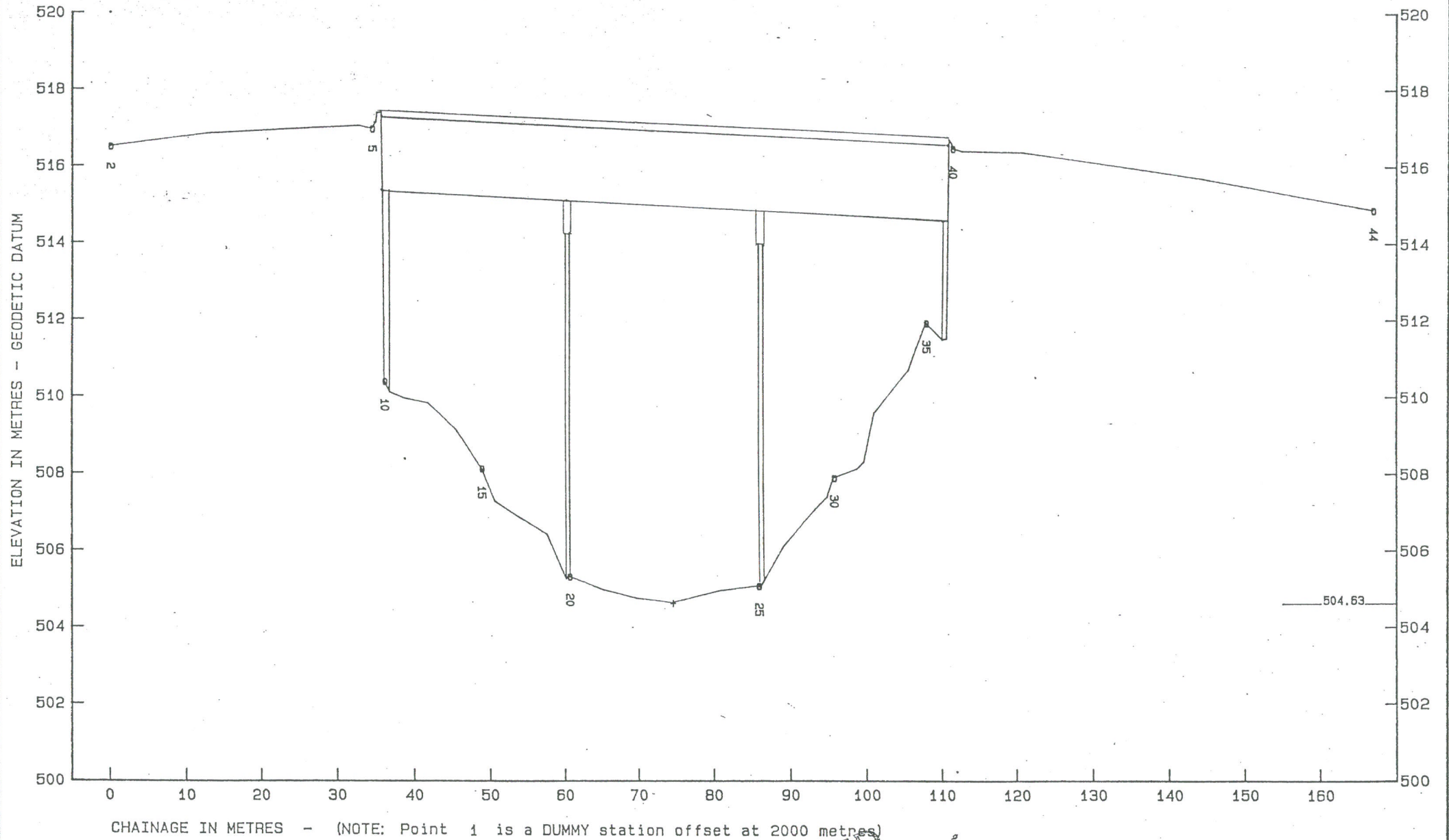
PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	SCALE	
	SURVEY DATE: SEPT1990	H = 1: 1000	V = 1: 100

STATIONS	DISTANCE	CHAINAGE	ELEV	NO.	NAME OR REMARKS
310 210		0.00	518.65	1	CL. RR-
	56.45				
309 209		56.45	518.04	2	CL. RR-
	59.47				
308 208		115.92	517.45	3	CL. RR-
	51.18				
307 207		167.10	516.97	4	CL. RR-END. LB
	21.39				
306 206		188.48	516.74	5	CL. RR-BRGE
	27.02				
305 205		215.50	516.42	6	CL. RR-PIER
	26.02				
304 204		241.53	516.15	7	CL. RR-END. RB
	73.39				
303 203		314.91	515.23	8	CL. RR
	87.84				
302 202		404.75	514.49	9	CL. RR
	74.51				
301 201		479.26	513.89	10	CL. RR
	52.11				
300 200		531.37	513.67	11	CL. RR

JOIN 300-301	SB8 09 19E	52.107
JOIN 301-302	SB9 30 08E	74.512
JOIN 302-303	NB9 46 02E	89.836
JOIN 303-304	SB8 32 46E	73.386
JOIN 304-305	SB8 02 20E	26.020
JOIN 305-306	NB9 27 07E	27.052
JOIN 306-307	SB9 57 48E	21.386
JOIN 307-308	SB7 45 04E	51.179
JOIN 308-309	SB7 46 20E	59.470
JOIN 309-310	SB7 33 55E	56.447

KETTLE RIVER-WEST Cross Section 39

(U/S CASCADE FALLS)

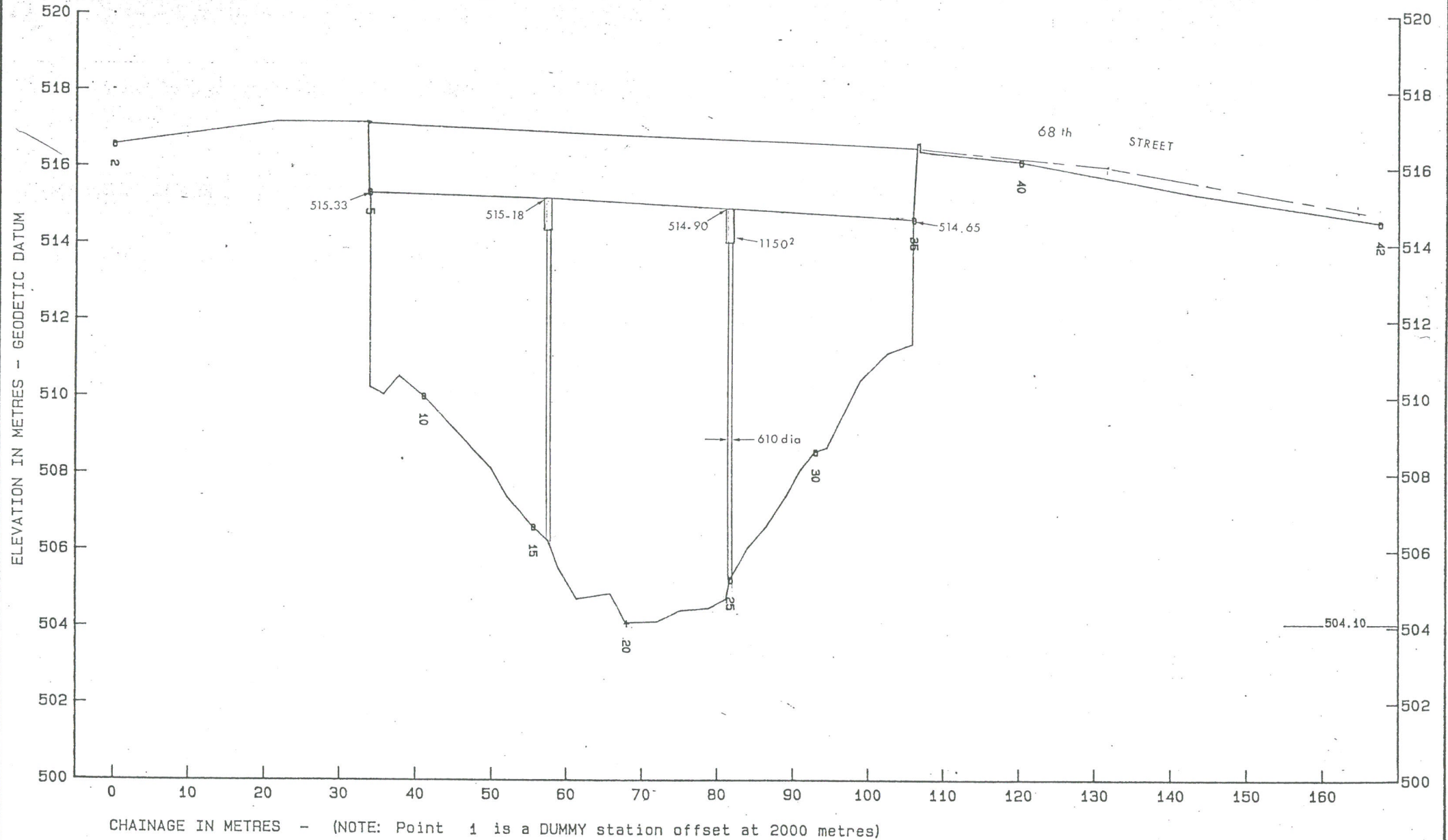


PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	S C 7 A	
	SURVEY DATE: SEPT1990	H = 1:500	V = 1:100

REDUCED

KETTLE RIVER-WEST Cross Section 40

(U/S CASCADE FALLS)



PROVINCE OF BRITISH COLUMBIA
SURVEYS SECTION - WATER MANAGEMENT BRANCH

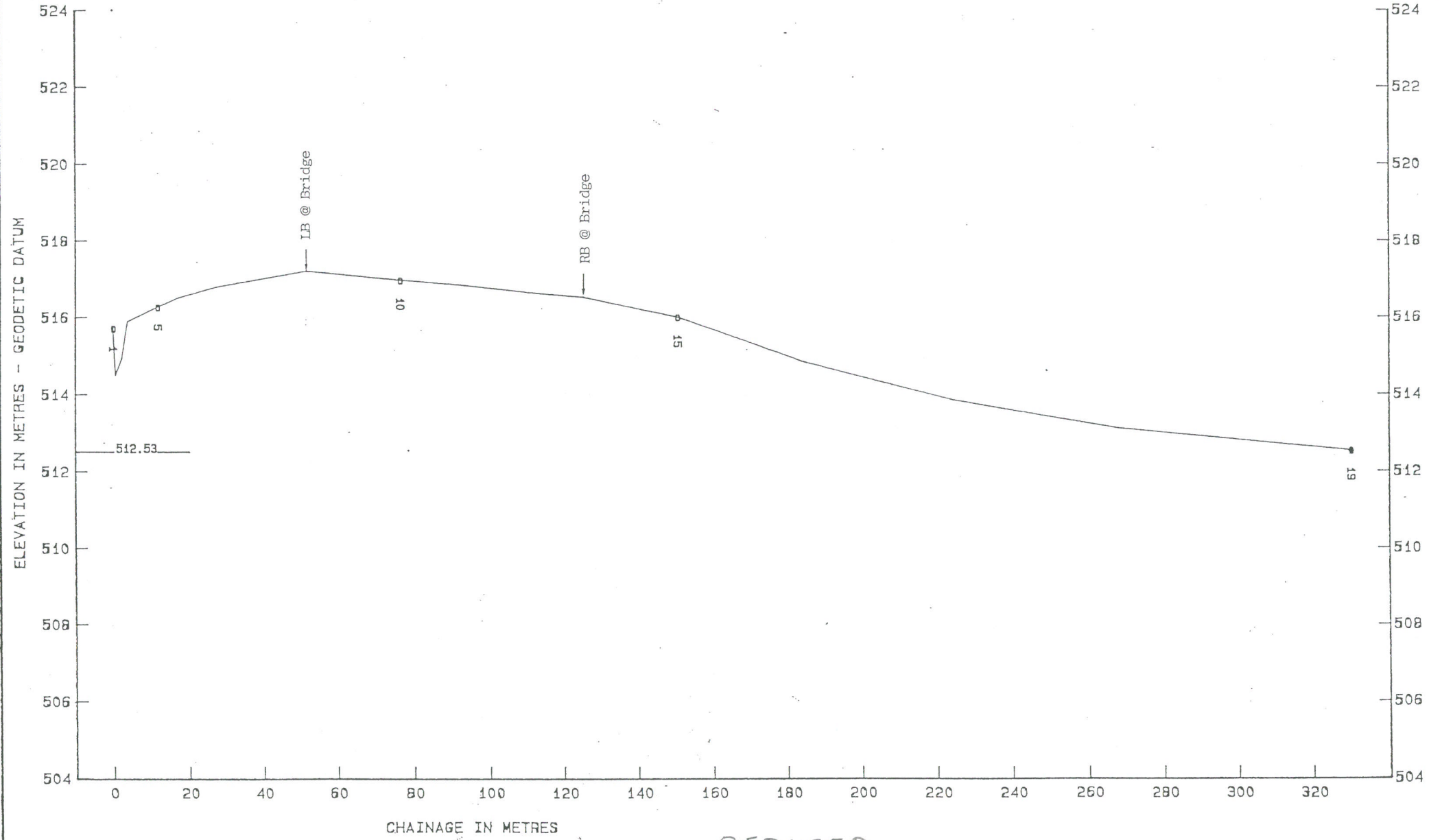
PROJECT NO: 9023F055
SURVEY DATE: SEPT1990

SCALE
H = 1:500 1:100

REDUCED

STATIONS	DISTANCE	CHAINAGE	ELEV	NO.	NAME OR REMARKS
241 341		0.00	515.73	1	ON. SLOPE
242 342	0.60	0.60	514.50	2	TOE. SLOPE
243 343	1.65	2.24	514.93	3	
244 344	1.57	3.82	515.91	4	TOP. SHLDR-3
245 345	7.83	11.64	516.28	5	
246 346	5.87	17.51	516.53	6	CL. HWY-3
247 347	9.87	27.37	516.61	7	
248 348	24.53	51.91	517.22	8	CL-END. BRGE <i>L. BANK</i>
249 349	20.52	72.43	517.01	9	CL-BRGE
250 350	4.26	76.69	516.98	10	CL-BRGE. PIER
251 351	15.79	92.46	516.84	11	CL-BRGE.
252 352	8.66	101.14	516.75	12	CL-BRGE. PIER
253 353	13.25	114.39	516.62	13	CL-BRGE.
254 354	11.18	125.57	516.52	14	CL-BRGE. END <i>R. BANK</i>
255 355	25.18	150.75	516.00	15	CL-68TH
256 356	33.56	184.31	514.84	16	CL-68TH
257 357	40.00	224.31	513.86	17	CL-68TH
258 358	44.36	268.66	513.11	18	CL-68TH
259 359	61.47	330.13	512.54	19	CL-68TH-1ST
JOIN 241-242	S48 03 33W		0.595		
JOIN 242-243	S56 11 51W		1.648		
JOIN 243-244	S57 25 27W		1.574		
JOIN 244-245	S61 44 36W		7.825		
JOIN 245-246	S72 33 45W		5.866		
JOIN 246-247	S60 16 09W		9.865		
JOIN 247-248	S65 31 52W		24.533		
JOIN 248-249	S63 50 06W		20.523		
JOIN 249-250	S64 47 22W		4.256		
JOIN 250-251	S64 51 53W		15.790		
JOIN 251-252	S64 32 15W		8.659		
JOIN 252-253	S64 52 49W		13.254		
JOIN 253-254	S64 30 50W		11.183		
JOIN 254-255	S63 10 11W		25.173		
JOIN 255-256	S63 41 35W		33.557		
JOIN 256-257	S63 10 08W		40.000		
JOIN 257-258	S63 00 09W		44.358		
JOIN 258-259	S63 04 36W		61.468		

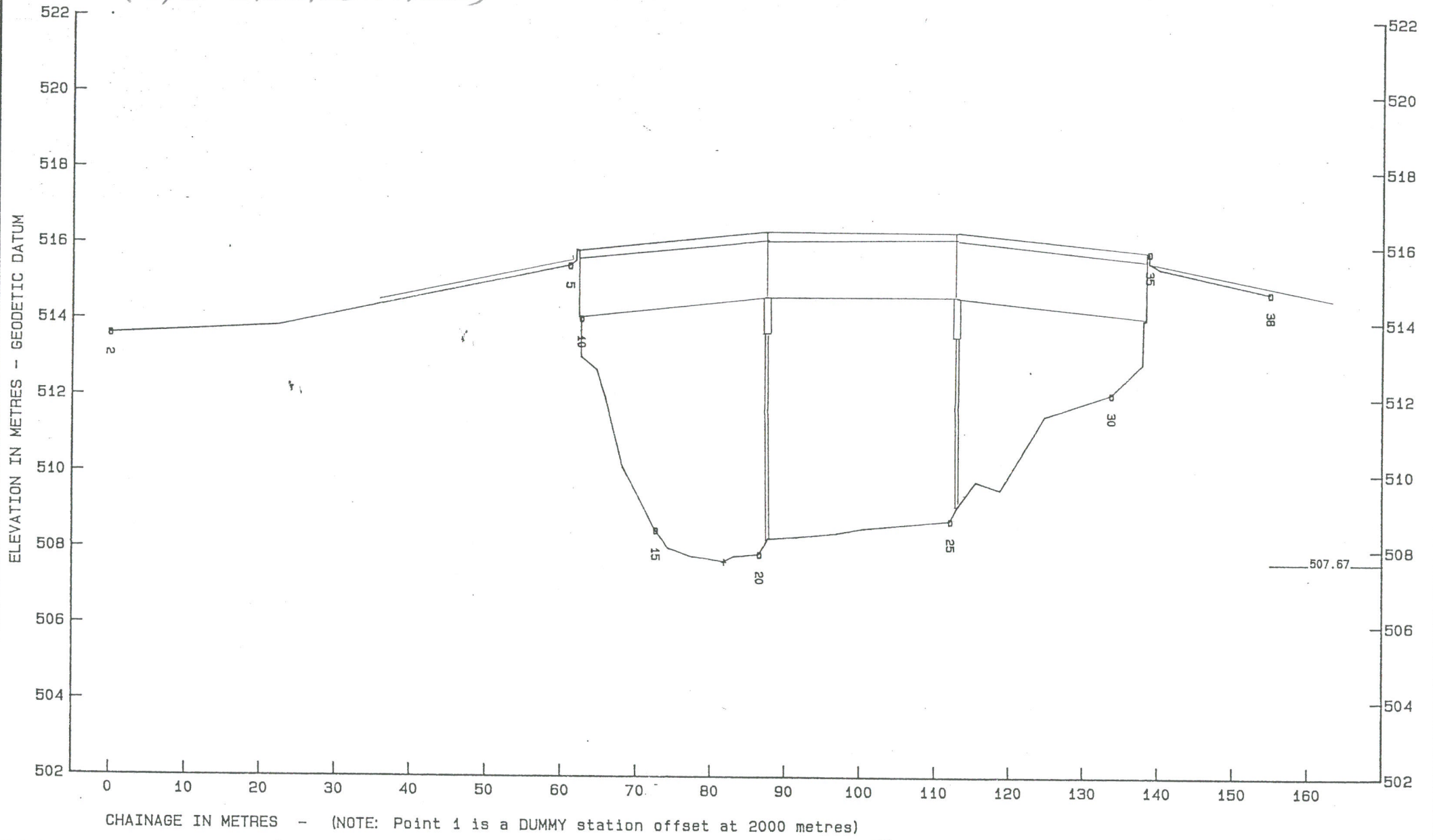
KETTLE RIVER Centreline Profile - 68th Avenue *AT XS 39/40*



REDUCED

PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	SCALE	
	SURVEY DATE: SEPT1990	H = 1: 1000	V = 1: 100

KETTLE RIVER-WEST Cross Section 42 - 2nd Street Bridge (U/S CASCADE FALLS)

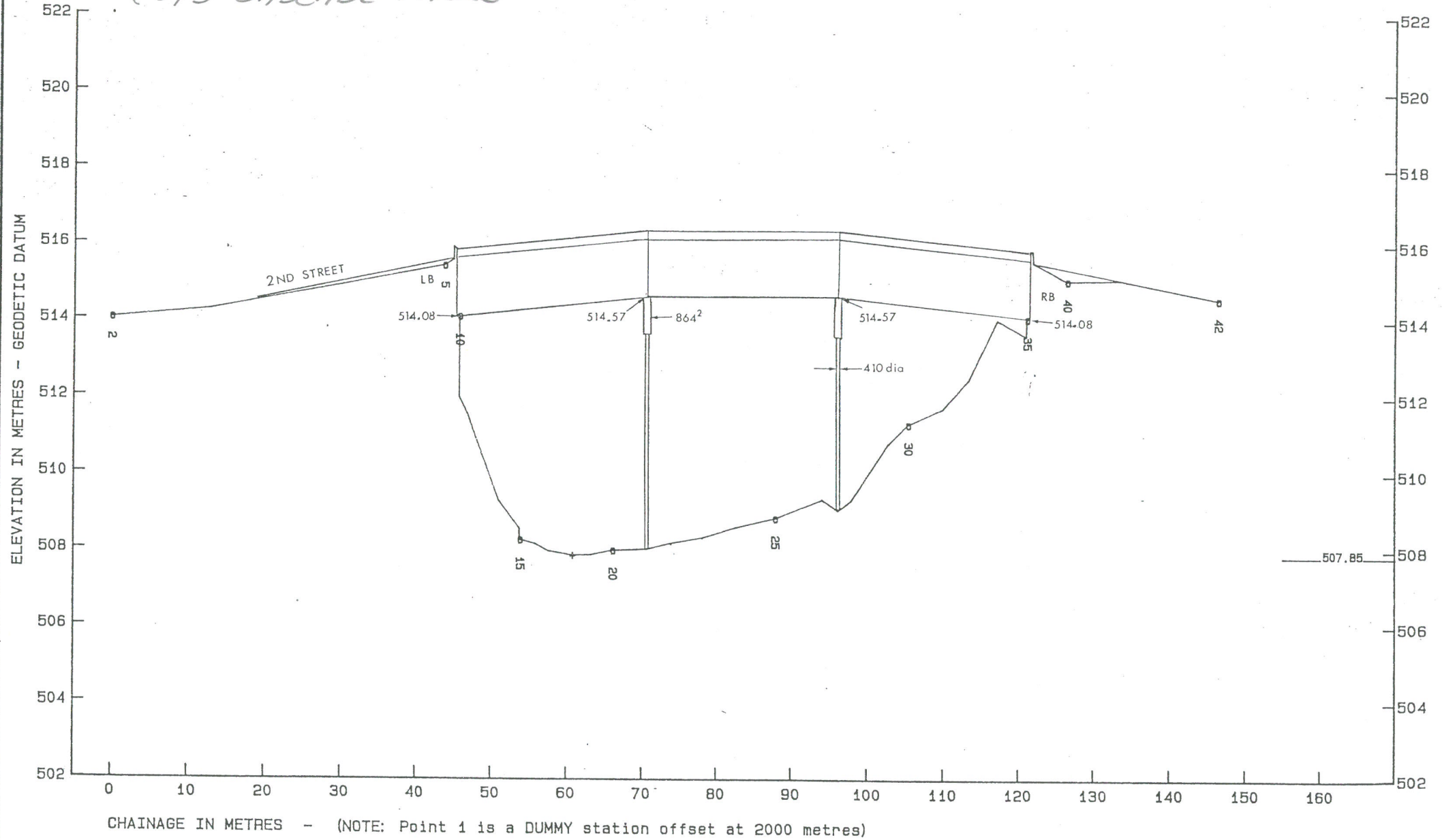


PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055 SURVEY DATE: SEPT1990	SCALE H = 1:500 V = 1:100
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REDUCED

KETTLE RIVER-WEST Cross Section 43 - 2nd Street Bridge

(U/S CASCADE FALLS)



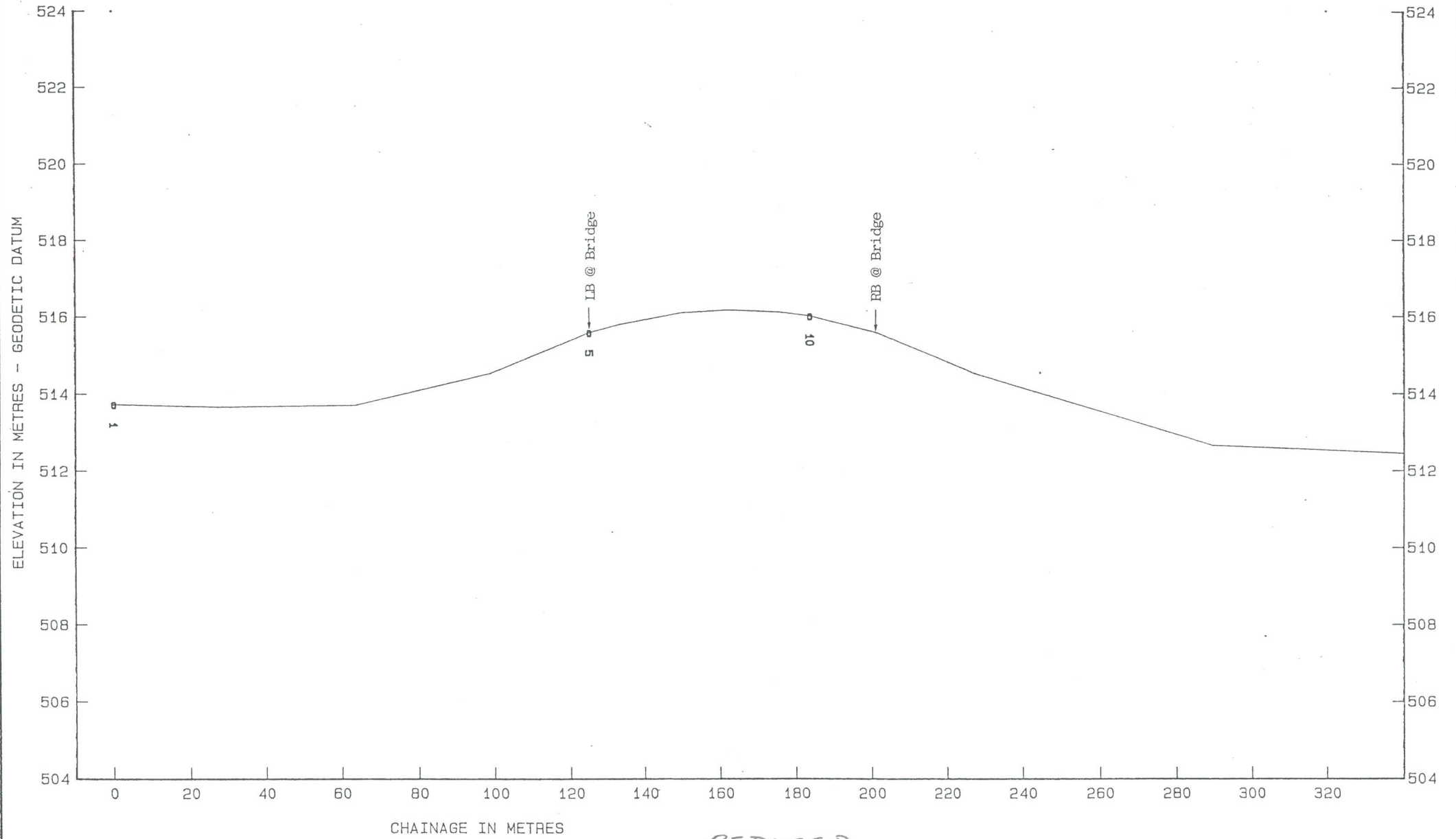
PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	SCALE
	SURVEY DATE: SEPT1990	H = 1:500 V = 1:100

REDUCED

STATIONS	DISTANCE	CHAINAGE	ELEV	NO.	NAME OR REMARKS
290 390		0.00	513.74	1	CL. 2ND-72ND
289 389	27.27	27.27	513.67	2	CL. 2ND
288 388	36.39	63.66	513.71	3	CL. 2ND
287 387	55.17	78.85	514.53	4	CL. 2ND
286 386	26.26	125.11	515.58	5	CL. BRGE END <i>L. BANK</i>
285 385	8.46	133.57	515.81	6	CL. BRGE
284 384	16.76	150.33	516.11	7	CL. BRGE
283 383	11.49	161.82	516.18	8	CL. BRGE
282 382	13.94	175.76	516.12	9	CL. BRGE
281 381	7.97	183.73	516.01	10	CL. BRGE
280 380	17.44	201.17	515.58	11	CL. 2ND-END. BRG <i>R. BANK</i>
279 379	26.41	227.58	514.52	12	CL. 2ND
278 378	62.05	289.62	512.65	13	CL. 2ND
277 377	27.74	317.37	512.55	14	CL. 2ND
276 376	32.44	349.81	512.40	15	CL. 2ND-69TH

JOIN 276-277	N14 45 48W	32.442
JOIN 277-278	N15 10 32W	27.744
JOIN 278-279	N14 51 35W	62.047
JOIN 279-280	N14 46 58W	26.408
JOIN 280-281	N14 27 35W	17.436
JOIN 281-282	N15 58 14W	7.975
JOIN 282-283	N15 07 56W	13.936
JOIN 283-284	N15 10 19W	11.488
JOIN 284-285	N15 12 25W	16.763
JOIN 285-286	N14 07 32W	8.461
JOIN 286-287	N15 10 44W	26.236
JOIN 287-288	N14 56 10W	35.172
JOIN 288-289	N14 37 35W	36.387
JOIN 289-290	N14 58 40W	27.294

KETTLE RIVER Centreline Profile - 2nd Street *AT XS 42/43*

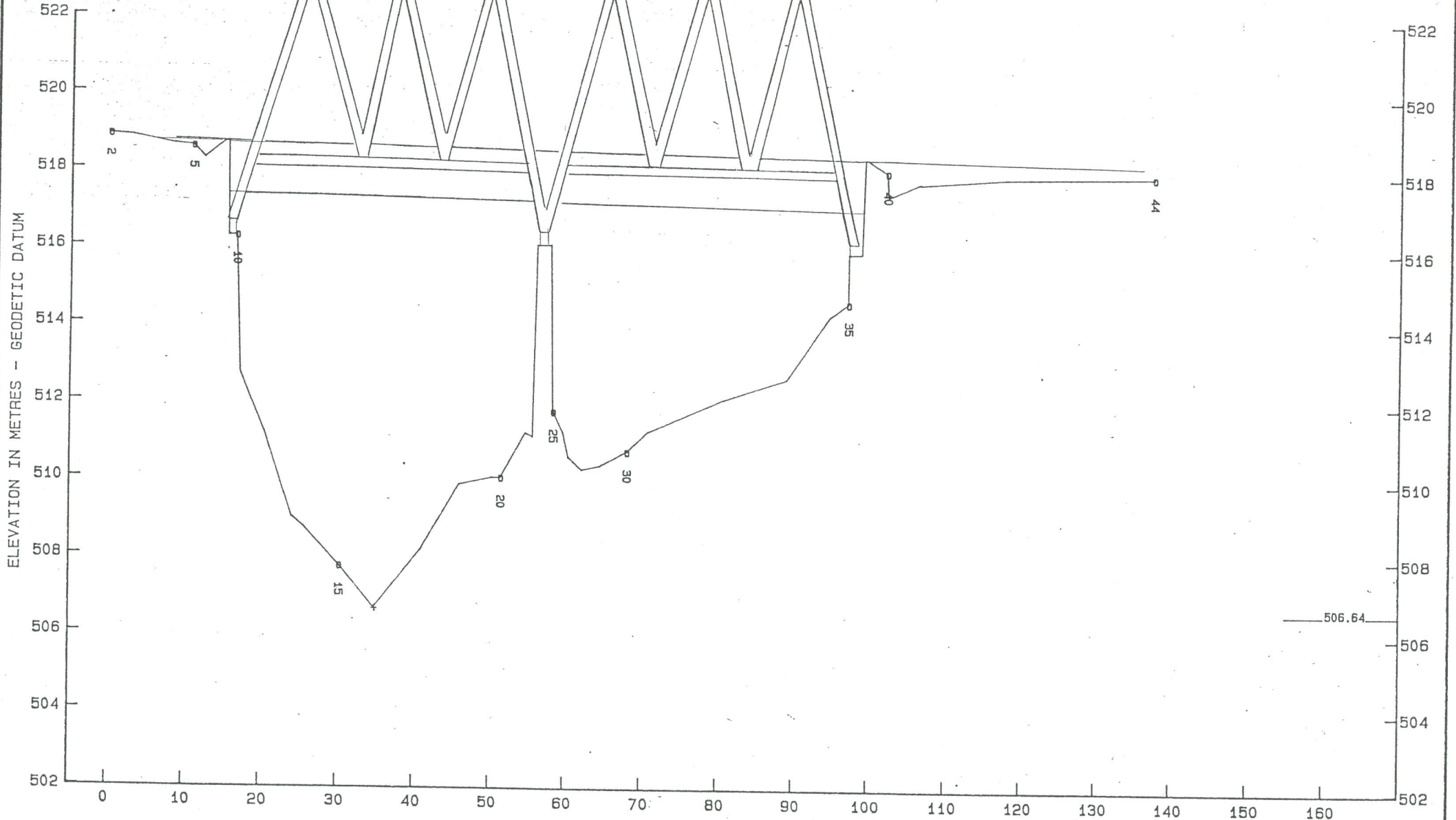


REDUCED

PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	SCALE	
	SURVEY DATE: SEPT1990	H = 1: 1000	V = 1: 100

(U/S CASCADE FALLS)

KETTLE RIVER-WEST Cross Section 46

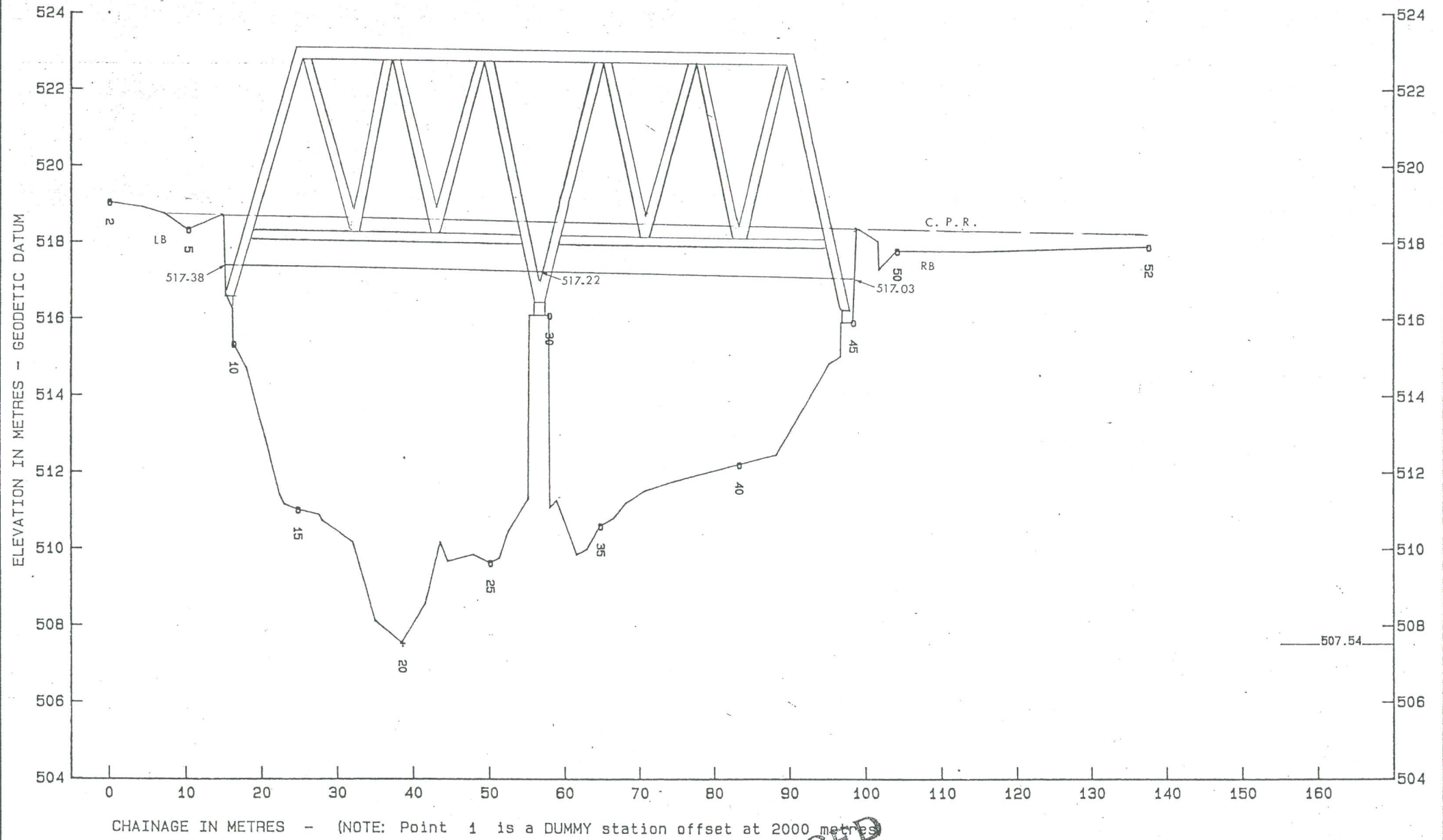


CHAINAGE IN METRES - (NOTE: Point 1 is a DUMMY station offset at 2000 metres)

PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	SCALE
	SURVEY DATE: SEPT1990	H = 1:500 V = 1:100

REDUCED

KETTLE RIVER-WEST Cross Section 47 (U/S CASCADE FALLS)



PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	SCALE H = 1:500 V = 1:100	
	SURVEY DATE: SEPT1990		

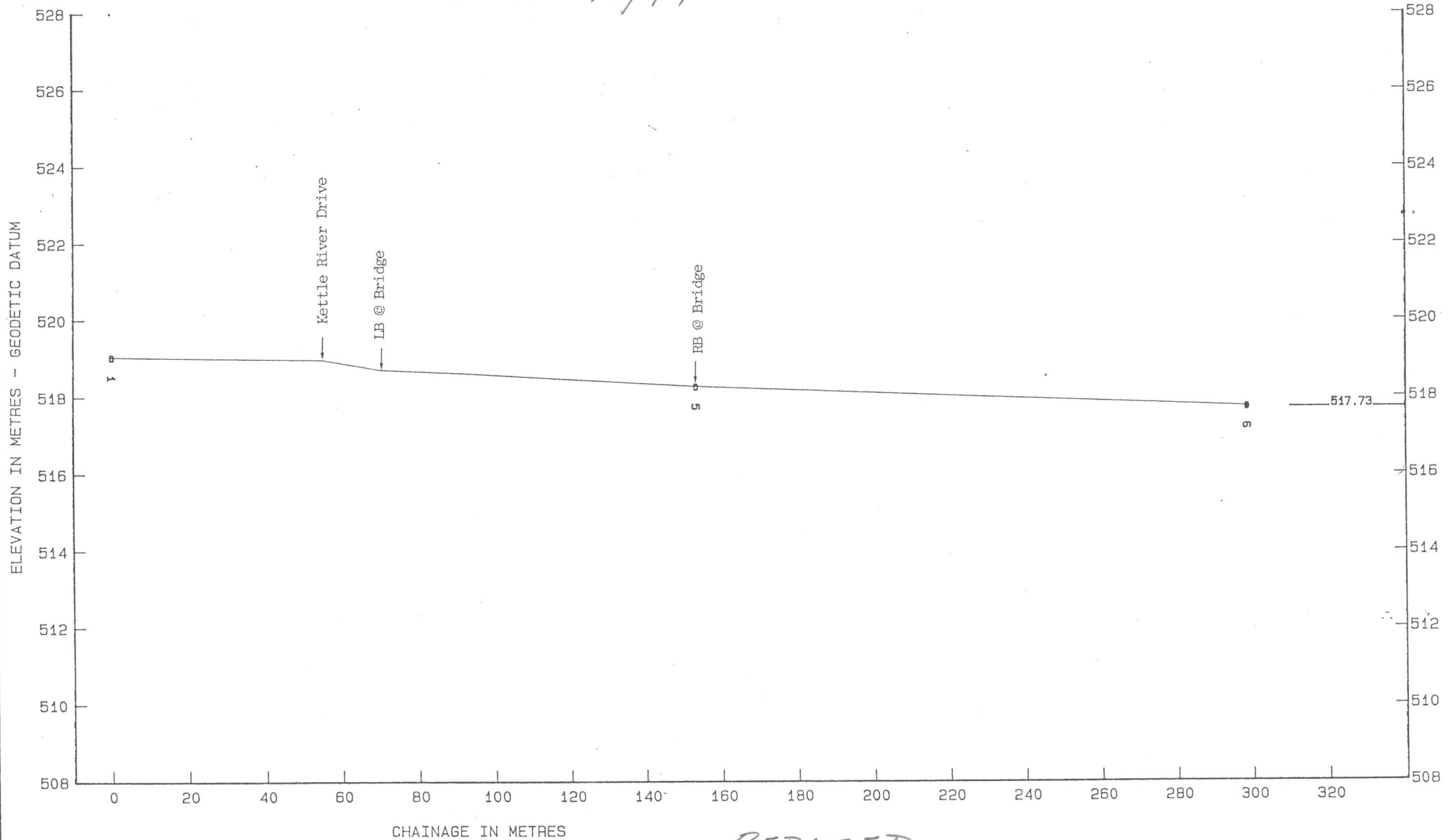
REDUCED

STATIONS	DISTANCE	CHAINAGE	ELEV	NO.	NAME OR REMARKS
255 355		0.00	519.06	1	CL-RR
	54.96				
254 354		54.96	518.97	2	CL-RR-RD
	15.43				
253 353		70.39	518.70	3	CL-END. BR <i>L. BANK</i>
	22.70				
252 352		93.09	518.61	4	CL. RR
	60.32				
251 351		153.41	518.26	5	CL-END. BR <i>R. BANK</i>
	145.17				
250 350		298.58	517.74	6	CL. RR

JOIN 250-251	N45 47 00W	145.173
JOIN 251-252	N46 28 02W	60.318
JOIN 252-253	N44 58 18W	22.700
JOIN 253-254	N45 03 26W	15.431
JOIN 254-255	N47 00 03W	54.961

KETTLE RIVER Centreline Profile - CPR Bridge (West Grand Forks)

AT XS 46/47

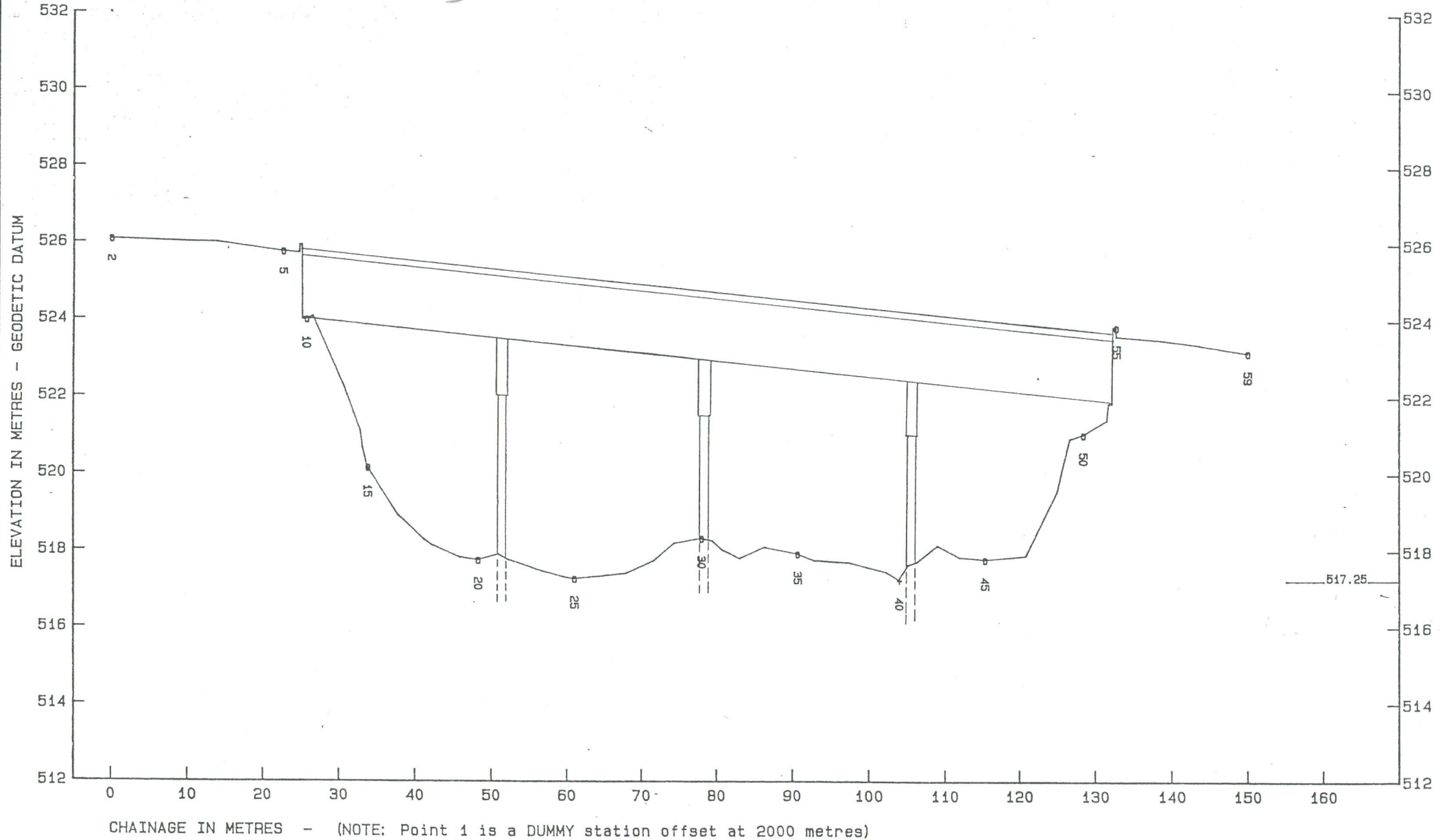


REDUCED

PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	SCALE	
	SURVEY DATE: SEPT1990	H = 1:1000	V = 1:100

KETTLE RIVER-WEST Cross Section 58

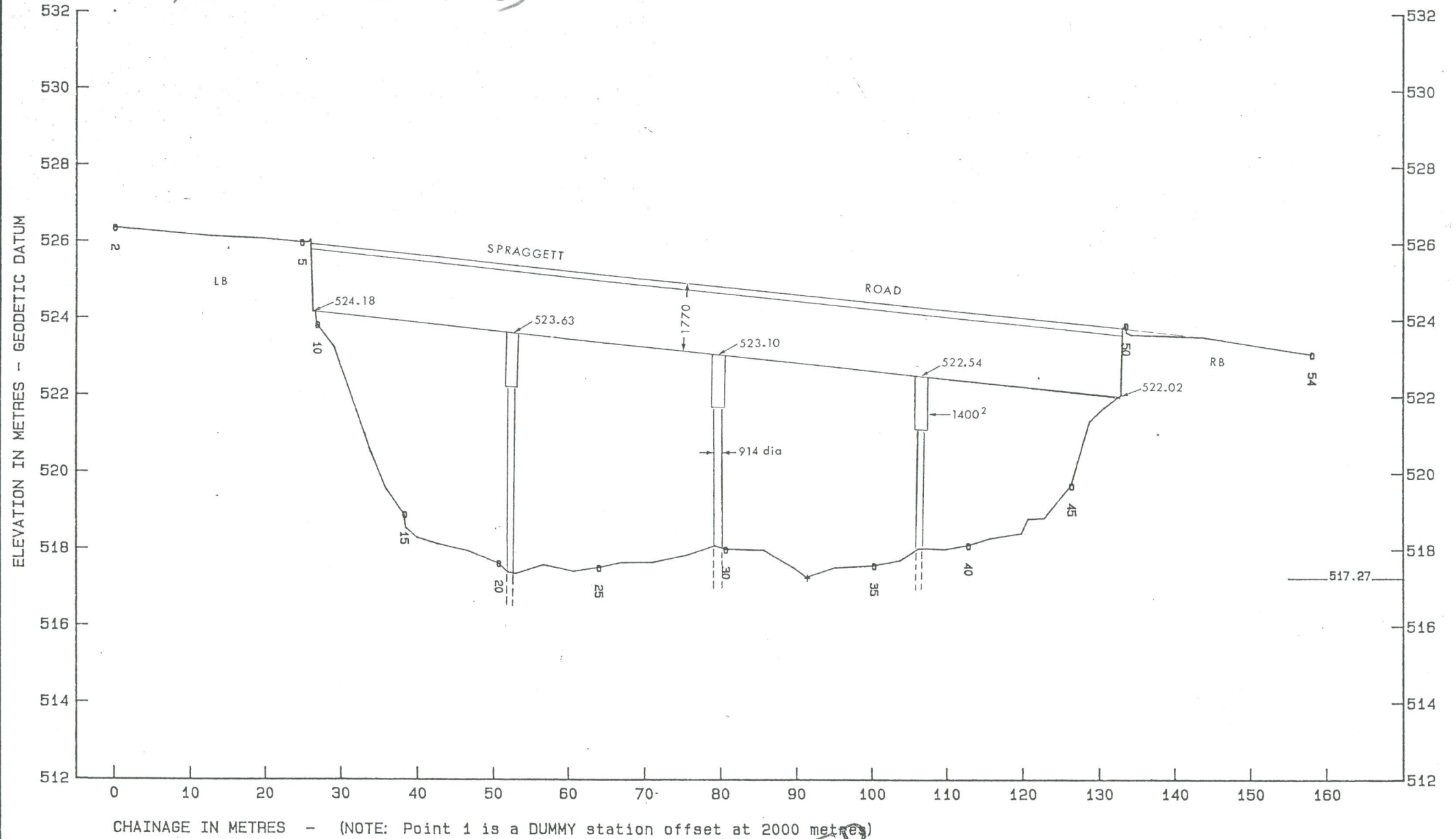
(U/S CASCADE FALLS)



PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	SCALE
	SURVEY DATE: SEPT1990	H = 1:500 1:100

REDUCED

KETTLE RIVER-WEST Cross Section 59 (U/S CASCADE FALLS)



PROVINCE OF BRITISH COLUMBIA
SURVEYS SECTION - WATER MANAGEMENT BRANCH

PROJECT NO: 9023F055

SURVEY DATE: SEPT1990

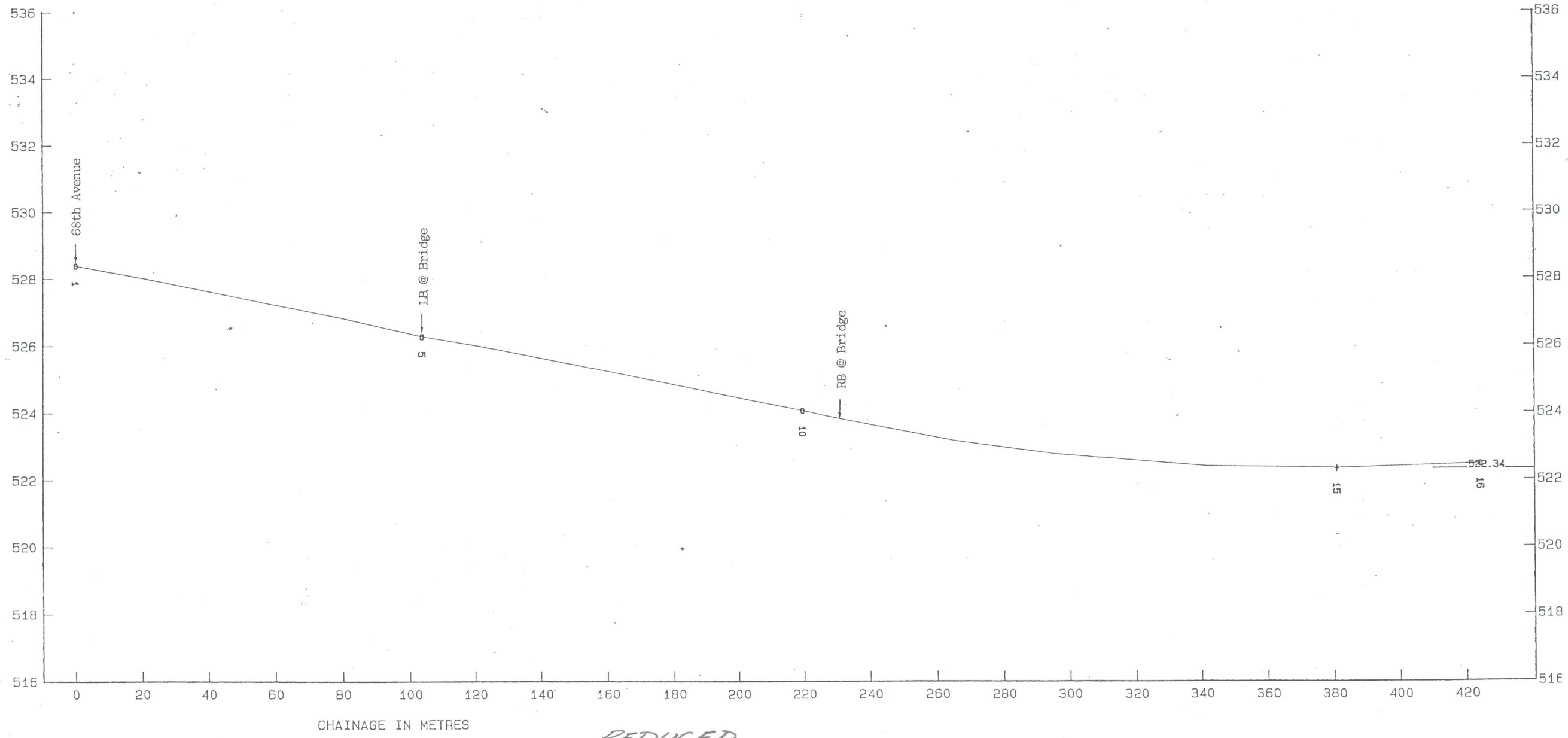
SCALE
H = 1:500
V = 1:100

REDUCED

STATIONS	DISTANCE	CHAINAGE	ELEV	NO.	NAME OR REMARKS
286 386		0.00	528.40	1	CL. SPRAG-67
287 387	22.13	22.13	527.99	2	CL. SPRAGGETT
288 388	33.52	55.65	527.31	3	CL. SPRAGGETT
289 389	23.58	79.23	526.84	4	CL. SPRAGGETT
290 390	24.50	103.74	526.29	5	CL. SPRAGGETT
291 391	18.74	122.48	525.98	6	CL. BR. END <i>L. BANK</i>
292 392	22.61	145.09	525.54	7	CL. BR
293 393	25.71	170.80	525.03	8	CL. BR
294 394	23.93	194.73	524.56	9	CL. BR
295 395	24.78	219.51	524.07	10	CL. BR
296 396	10.71	230.22	523.85	11	CL. BR. END <i>R. BANK</i>
297 397	35.12	265.34	523.17	12	CL. SPRAGGETT
298 398	31.57	296.91	522.75	13	CL. SPRAGGETT
299 399	44.27	341.18	522.39	14	CL. SPRAGGETT
300 400	39.68	380.86	522.35	15	CL. SPRAGGETT
301 401	43.21	424.07	522.48	16	CL. SPRAGGETT

JOIN 286-287	S01 51 20E	22.130
JOIN 287-288	S00 41 14E	33.524
JOIN 288-289	S00 12 46E	23.579
JOIN 289-290	S00 01 53W	24.504
JOIN 290-291	S00 27 59W	18.741
JOIN 291-292	S00 06 44E	22.614
JOIN 292-293	S00 22 50W	25.708
JOIN 293-294	S00 19 43E	23.927
JOIN 294-295	S00 05 51E	24.780
JOIN 295-296	S00 31 06E	10.708
JOIN 296-297	S00 07 27E	35.119
JOIN 297-298	S00 14 31W	31.572
JOIN 298-299	S00 04 56E	44.274
JOIN 299-300	S00 01 20E	39.680
JOIN 300-301	S00 03 43E	43.206

KETTLE RIVER Centreline Profile - Spraggett Road *AT XS58/59*



REDUCED

PROVINCE OF BRITISH COLUMBIA SURVEYS SECTION - WATER MANAGEMENT BRANCH	PROJECT NO: 9023F055	SCALE	
	SURVEY DATE: SEPT1990	H = 1: 1000	V = 1: 100