11-5-2008

Ex. 280-US-463

Unknown

Stream: NF Sprague River @FSB
Site: 651 (Forest Service Boundary)
Date: 6/2/1993
Habitat: Cascade **Flow:** High

(1) Level Loop Survey (BM & HP)

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	6.08	106.08		100.00
HP3				
HP2			8.06	98.02
HP1			4.32	101.76
TP				
HP1	4.27	106.03		
HP2			8.01	98.02
HP3			5.23	100.80
BM			6.03	100.00

Comment:

(2) Water Surface Elevation (WSE) Survey

TR	River Station L/R bank (ft)	River Station Ave (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
1-L	0	0	106.03	12.18	0.00	93.85	94.05	
1-R	0			11.78	0.00	94.25		
2-L	84	84	106.03	9.89	0.00	96.14	96.04	
2-R	84			10.09	0.00	95.94		
3-L	158	158	106.03	7.89	0.00	98.14	98.09	
3-R	158			8.00	0.00	98.03		
							Ave Q=	360.0

Note: No Q measured. See "data entry note" for estimated Q.
WSE slope = 2.554%

(3) Meter and propeller ID for Velocity Correction

Meter ID: NA
Propeller ID: NA

Date: 7/1/1993
Habitat: Cascade **Flow:** Mid

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	12.93	112.93		100.00
HP3			12.13	100.80
HP2			14.89	98.04
HP1			11.18	101.75
TP				
HP1	12.47	114.22		
HP2			16.16	98.06
HP3			13.42	100.80
BM			14.21	100.01

Comment:

(2) Water Surface Elevation (WSE) Survey

TR	River Station L/R bank (ft)	River Station Ave (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
1-L	0	0	114.22	21.51	0.00	92.71	92.72	
1-R	0			21.50	0.00	92.72		92.4
2-L	84	84	111.78	17.33	0.00	94.45	94.44	
2-R	84			17.35	0.00	94.43		65.3
3-L	158	158	110.86	14.01	0.00	96.85	96.80	
3-R	158			14.12	0.00	96.74		86.8
							Ave Q=	81.5

Note:
WSE slope = 2.582%

(3) Meter and propeller ID for Velocity Correction

Meter ID: NA
Propeller ID: NA

Date: 9/16/1993
Habitat: Cascade **Flow:** Low

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	13.95	113.95		100.00
HP1			12.18	101.77
HP2			15.92	98.03
HP3			13.15	100.80
TP				
HP3	14.99	115.79		
HP2			17.74	98.05
HP1			14.02	101.77
BM			15.78	100.01

Comment:

(2) Water Surface Elevation (WSE) Survey

TR	River Station L/R bank (ft)	River Station Ave (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
1-L	0	0	115.79	23.35	0.00	92.44	92.27	
1-R	0			23.70	0.00	92.09		41.4
2-L	84	84	115.79	21.58	0.00	94.21	94.23	
2-R	84			21.55	0.00	94.24		42.0
3-L	158	158	115.79	19.33	0.00	96.46	96.47	
3-R	158			19.31	0.00	96.48		41.0
							Ave Q=	41.5

Note:
WSE slope = 2.661%

(3) Meter and propeller ID for Velocity Correction

Meter ID: NA
Propeller ID: NA

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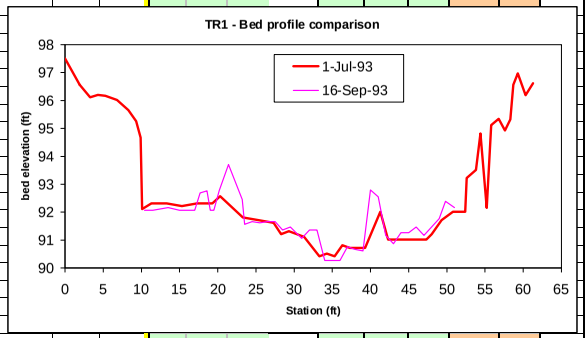
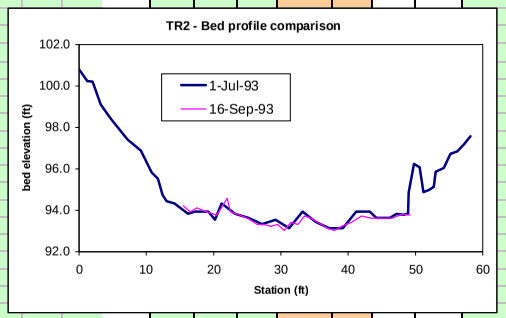
Stream:	NF Sprague Riv		2-Jun-93												1-Jul-93														16-Sep-93														
Site:	651			Sta	FS	Ground	Depth	Vel (ft/s)					q			Sta	adj	FS	Ground	Depth	Vel (ft/s)					q				Sta	FS	Ground	Depth	Vel (ft/s)					Angle	q	
Transect:	1			(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	$NV_{0.2/0.6}$	$NV_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	$NV_{0.2/0.6}$	$NV_{0.8}$	Ave	(cfs)	substrate			(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	$NV_{0.2/0.6}$	$NV_{0.8}$	Ave	(deg)	(cfs)	substrate
Habitat:	Cascade																61.3																								
															RWP	0.0	61.3	17.60	96.62							7.7															
Survey	HI	Q														1.0	60.3	18.03	96.19							7.7															
Date	(ft)	(cfs)														2.0	59.3	17.25	96.97							7.7		LEW	10.4		92.07	0.20	0.19		0.19		0.19		0.02	3.5
6/2/1993	106.03															2.6	58.7	17.65	96.57							7.7			11.5		92.07	0.20	0.08		0.08		0.08		0.02	5.5
7/1/1993	114.22	92.4														3.0	58.3	18.90	95.32							7.7			13.5		92.17	0.10	0.82		0.82		0.82		0.14	5.5
9/16/1993	115.79	41.4														3.7	57.6	19.29	94.93							7.7			15.0		92.07	0.20	0.41		0.41		0.41		0.14	6.5
																4.5	56.8	18.88	95.34							7.7			17.0		92.07	0.20	0.57		0.57		0.57		0.11	6.5
																5.5	55.8	19.10	95.12							7.7			17.7	23.10	92.69									8.8
																6.1	55.2	22.07	92.15							7.7			18.6	23.03	92.76									8.8
																6.9	54.4	19.40	94.82							7.7			19.0		92.07	0.20	0.24		0.24		0.24		0.01	6.6
																7.5	53.8	20.71	93.51							7.7			19.5		92.07	0.20	0.33		0.33		0.33		0.02	6.6
																8.7	52.6	21.00	93.22							7.7			20.2	23.02	92.77									8.8
															REW	8.9	52.4		92.02	0.70	-0.06		-0.06		-0.06	-0.01	7.7			21.4	22.08	93.71									8.8
																9.5	51.8		92.02	0.70	0.57		0.57		0.57	0.32	5.3			23.2	23.34	92.45									8.8
																10.5	50.8		92.02	0.70	1.49		1.49		1.49	1.30	5.3			23.5		91.57	0.70	1.89		1.89		1.89		0.66	6.6
																12.0	49.3		91.72	1.00	1.25		1.25		1.25	1.75	7.6			24.5		91.67	0.60	2.08		2.08		2.08		1.25	6.6
																13.3	48.0		91.22	1.50	0.29		0.29		0.29	0.44	7.6			25.5		91.62	0.65	2.66		2.66		2.66		1.73	6.7
																14.0	47.3		91.02	1.70	-0.24		-0.24		-0.24	-0.35	7.6			26.5		91.67	0.60	2.81		2.81		2.81		1.69	6.7
																15.0	46.3		91.02	1.70	0.07		0.07		0.07	0.12	7.6			27.5		91.67	0.60	2.01		2.01		2.01		1.21	7.7
																16.0	45.3		91.02	1.70	3.47		3.47		3.47	5.90	6.6			28.5		91.37	0.90	0.13		0.13		0.13		0.12	7.7
																17.0	44.3		91.02	1.70	3.24		3.24		3.24	8.26	6.6			29.5		91.47	0.80	-0.09		-0.09		-0.09		-0.09	7.7
																19.0	42.3		91.02	1.70	1.60		1.60		1.60	4.08	7.7			31.0		91.07	1.20	1.83		1.83		1.83		2.75	7.7
																20.0	41.3		92.02	0.70	0.57		0.57		0.57	0.60	7.7			32.0		91.37	0.90	3.33		3.33		3.33		3.00	7.7
																22.0	39.3		90.72	2.00	-0.08		-0.08		-0.08	-0.24	7.6			33.0		91.37	0.90	3.50		3.50		3.50		3.15	7.7
																23.0	38.3		90.72	2.00	0.86		0.86		0.86	1.72	7.7			34.0		90.27	2.00	3.67		3.67		3.67		7.34	6.6
																24.0	37.3		90.72	2.00	1.05		1.05		1.05	2.10	6.6			35.0		90.27	2.00	2.73		2.73		2.73		5.46	6.6
																25.0	36.3		90.82	1.90	1.29		1.29		1.29	2.45	6.6			36.0		90.27	2.00	1.71		1.71		1.71		3.42	6.6
																26.0	35.3		90.42	2.30	3.67		3.67		3.67	8.44	6.6			37.0		90.77	1.50	0.93		0.93		0.93		1.40	7.7
																27.0	34.3		90.52	2.20	3.67		3.67		3.67	8.07	7.7			38.0		90.67	1.60	0.48		0.48		0.48		0.77	7.6
																28.0	33.3		90.42	2.30	3.54		3.54		3.54	12.21	7.7			39.0		90.62	1.65	1.08		1.08		1.08		0.89	7.7
																30.0	31.3		91.12	1.60	3.71		3.71		3.71	11.87	7.7			40.0	23.00	92.79									7.7
																32.0	29.3		91.32	1.40	0.16		0.16		0.16	0.34	7.7			41.0	23.24	92.55									7.7
																33.0	28.3		91.22	1.50	0.57		0.57		0.57	0.86	7.7			42.0		91.17	1.10	0.79		0.79		0.79		0.43	6.7
																34.0	27.3		91.62	1.10	2.92		2.92		2.92	4.82	6.7			43.0		90.87	1.40	0.40		0.40		0.40		0.56	6.6
																36.0	25.3		91.72	1.00	3.44		3.44		3.44	6.88	6.6			44.0		91.27	1.00	1.31		1.31		1.31		1.31	6.6
																38.0	23.3		91.82	0.90	3.09		3.09		3.09	6.95	8.8			45.0		91.27	1.00	1.98		1.98		1.98		1.98	7.6
																41.0	20.3		92.57	0.15	2.40		2.40		2.40	0.72	6.6			46.0		91.47	0.80	1.92		1.92		1.92		1.54	7.6
																42.0	19.3		92.32	0.40	0.71		0.71		0.71	0.43	8.8			47.0		91.17	1.10	0.26		0.26		0.26		0.43	7.6
																44.0	17.3		92.32	0.40	0.68		0.68		0.68	0.54	6.5			49.0		91.77	0.50	-0.03		-0.03		-0.03		-0.02	7.3
																46.0	15.3		92.22	0.50	0.69		0.69		0.69	0.69	6.5			49.8	23.40	92.39									8.8
																48.0	13.3		92.32	0.40	1.22		1.22		1.22	0.98	5.5			51.0		92.17	0.10	0.13		0.13		0.13		0.01	5.3
																50.0	11.3		92.32	0.40	0.04		0.04		0.04	0.03	5.5		REW	52.6		92.07	0.20	0.00		0.00		0.00		0.00	5.3
																51.2	10.1		92.12	0.60	0.29		0.29		0.29	0.10	7.7		RWP	61.3											7.7
																51.4	9.9	19.55	94.67							7.7															
																52.0	9.3	18.96	95.26							7.7															
																53.0	8.3	18.57	95.65							7.7															
																54.5	6.8	18.20	96.02							7.7															
																56.0	5.3	18.05	96.17							9.9															
																57.0	4.3	18.02	96.20							9.9															
																58.0	3.3	18.10	96.12							9.9															
																59.4	1.9	17.65	96.57							9.9															
															LWP	61.3	0.0	16.71	97.51							9.9															

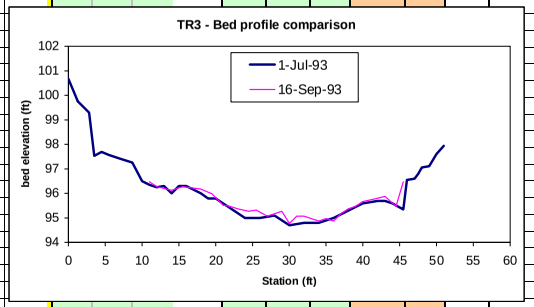


Stream:	NF Sprague Riv		2-Jun-93												1-Jul-93																		16-Sep-93														
Site:	651			Sta	FS	Ground	Depth	Vel (ft/s)					q			Sta	adj	FS	Ground	Depth	Vel (ft/s)					Angle	q					Sta	FS	Ground	Depth	Vel (ft/s)					Angle	q	
Transect:	2			(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	$NV_{0.2/0.6}$	$NV_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	$NV_{0.2/0.6}$	$NV_{0.8}$	Ave	(deg)	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	$NV_{0.2/0.6}$	$NV_{0.8}$	Ave	(deg)	(cfs)	substrate
Habitat:	Cascade																58.2																											
Survey	HI	Q													RWP	0.0	58.2	14.20	97.58								9.9															
Date	(ft)	(cfs)														1.0	57.2	14.60	97.18								9.9															
6/2/1993	106.03															2.0	56.2	14.93	96.85								9.9	LEW	15.5		94.23	0.00	0.00		0.00		0.00		0.00	6.7
7/1/1993	111.78	65.3														3.0	55.2	15.06	96.72								9.9		16.5		93.93	0.30	0.69		0.69		0.69		0.21	6.6
9/16/1993	115.79	42.0														4.0	54.2	15.73	96.05								9.9		17.5		94.13	0.10	0.48		0.48		0.48		0.06	6.6
																5.2	53.0	15.92	95.86								9.9		19.0		93.93	0.30	1.24		1.24		1.24		0.47	6.7
																5.5	52.7	16.65	95.13								9.9		20.0		93.83	0.40	1.52		1.52		1.52		0.46	6.7
																6.2	52.0	16.79	94.99								9.9		20.5		93.78	0.45	1.08		1.08		1.08		0.12	6.6
																7.0	51.2	16.90	94.88								7.7		22.0	21.22	94.57									7.7
																7.6	50.6	15.70	96.08								7.7		22.5		93.93	0.30	3.05		3.05		3.05		0.46	6.5
																8.4	49.8	15.53	96.25								7.7		23.5		93.83	0.40	2.22		2.22		2.22		1.11	6.6
																9.2	49.0	16.91	94.87								7.7		25.0		93.63	0.60	1.26		1.26		1.26		1.13	6.6
															REW	9.3	48.9		93.84	0.60	1.33		1.33		1.33		0.28	6.6		26.5		93.33	0.90	1.54		1.54		1.54		1.73	6.6
																10.0	48.2		93.79	0.65	0.24		0.24		0.24		0.13	6.6		27.5		93.33	0.90	2.07		2.07		2.07		1.86	6.6
																11.0	47.2		93.84	0.60	-0.46		-0.46		-0.46		-0.28	6.6		28.5		93.23	1.00	1.86		1.86		1.86		1.86	6.6
																12.0	46.2		93.64	0.80	-0.51		-0.51		-0.51		-0.41	6.6		29.5		93.33	0.90	2.30		2.30		2.30		2.07	6.6
																13.0	45.2		93.64	0.80	2.51		2.51		2.51		2.01	6.7		30.5		93.03	1.20	1.69		1.69		1.69		2.03	6.6
																14.0	44.2		93.64	0.80	3.54		3.54		3.54		2.83	6.7		31.5		93.43	0.80	2.71		2.71		2.71		2.17	7.6
																15.0	43.2		93.94	0.50	4.39		4.39		4.39		3.29	6.7		32.5		93.33	0.90	1.93		1.93		1.93		1.74	7.6
																17.0	41.2		93.94	0.50	2.65		2.65		2.65		2.65	6.6		33.5		93.73	0.50	3.08		3.08		3.08		1.54	7.7
																19.0	39.2		93.14	1.30	2.50		2.50		2.50		6.50	6.6		34.5		93.63	0.60	3.10		3.10		3.10		2.33	7.7
																21.0	37.2		93.14	1.30	2.38		2.38		2.38		6.19	6.6		36.0		93.33	0.90	1.64		1.64		1.64		1.85	6.6
																23.0	35.2		93.44	1.00	3.33		3.33		3.33		6.66	7.7		37.0		93.13	1.10	2.53		2.53		2.53		2.78	6.6
																25.0	33.2		93.94	0.50	2.87		2.87		2.87		2.87	7.7		38.0		93.03	1.20	3.29		3.29		3.29		3.95	6.6
																27.0	31.2		93.14	1.30	3.46		3.46		3.46		9.00	7.6		39.0		93.23	1.00	2.97		2.97		2.97		3.71	6.6
																29.0	29.2		93.54	0.90	2.83		2.83		2.83		5.09	6.6		40.5		93.43	0.80	2.15		2.15		2.15		2.58	6.6
																31.0	27.2		93.34	1.10	2.15		2.15		2.15		4.73	6.6		42.0		93.73	0.50	0.32		0.32		0.32		0.24	6.6
																33.0	25.2		93.64	0.80	1.93		1.93		1.93		3.09	6.6		43.5		93.63	0.60	3.91		3.91		3.91		3.52	6.7
																35.0	23.2		93.84	0.60	3.15		3.15		3.15		3.78	6.6		45.0		93.63	0.60	2.42		2.42		2.42		2.18	6.7
																37.0	21.2		94.34	0.10	1.21		1.21		1.21		0.18	6.6		46.5		93.63	0.60	-0.28		-0.28		-0.28		-0.25	6.6
																38.0	20.2		93.54	0.90	0.40		0.40		0.40		0.36	6.6		48.0		93.83	0.40	0.57		0.57		0.57		0.31	6.6
																39.0	19.2		93.94	0.50	2.99		2.99		2.99		2.24	6.7	REW	49.2		93.78	0.45	0.19		0.19		0.19		0.05	6.6
																41.0	17.2		93.94	0.50	2.22		2.22		2.22		1.67	6.6	RWP	58.2											
																42.0	16.2		93.84	0.60	2.65		2.65		2.65		2.39	6.6													
																44.0	14.2		94.34	0.10	0.55		0.55		0.55		0.09	6.7													
															LEW	45.2	13.0		94.44	0.00	0.00		0.00		0.00		0.00	7.6													
																45.8	12.4	17.03	94.75								9.7													
																46.5	11.7	16.25	95.53								9.7													
																47.4	10.8	15.94	95.84								9.7													
																49.0	9.2	14.90	96.88								9.7													
																51.0	7.2	14.35	97.43								9.7													
																53.5	4.7	13.35	98.43								9.7													
																55.0	3.2	12.67	99.11								9.7													
																56.2	2.0	11.57	100.21								9.7													
																57.0	1.2	11.53	100.25								9.7													
															LWP	58.2	0.0	10.97	100.81								9.7													



Ex. 280-US-463
Page 3 of 7

Stream:	NF Sprague Riv		2-Jun-93												1-Jul-93																		16-Sep-93														
Site:	651			Sta	FS	Ground	Depth	Vel (ft/s)					q			Sta	adj	FS	Ground	Depth	Vel (ft/s)						q							Sta	FS	Ground	Depth	Vel (ft/s)					Angle	q	
Transect:	3			(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	$NV_{0.2/0.6}$	$NV_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	$NV_{0.2/0.6}$	$NV_{0.8}$	Ave			(cfs)	substrate						(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	$NV_{0.2/0.6}$	$NV_{0.8}$	Ave	(deg)	(cfs)	substrate
Habitat:	Cascade																51.0																													
															RWP	0.0	51.0	12.92	97.94									7.9																			
Survey	HI	Q														1.0	50.0	13.26	97.60									7.9																			
Date	(ft)	(cfs)														2.0	49.0	13.75	97.11									7.9																			
6/2/1993	106.03															3.0	48.0	13.80	97.06									7.9																			
7/1/1993	110.86	86.8													REW	3.5	47.5		96.80	0.00	0.00		0.00		0.00		0.00	7.9	LEW	11.0		96.47	0.00	0.00		0.00		0.00		0.00	9.9
9/16/1993	115.79	41.0														4.0	47.0		96.60	0.20	-0.12		-0.12		-0.12		-0.02	7.7		12.0		96.27	0.20	0.25		0.25		0.25		0.08	3.6
																5.0	46.0		96.55	0.25	-0.05		-0.05		-0.05		-0.01	7.7		14.0		96.12	0.35	-0.02		-0.02		-0.02		-0.01	3.6
																5.5	45.5		95.35	1.45	0.02		0.02		0.02		0.03	7.7		15.5		96.27	0.20	0.09		0.09		0.09		0.04	6.3
																7.0	44.0		95.60	1.20	0.30		0.30		0.30		0.45	5.3		18.0		96.17	0.30	0.44		0.44		0.44		0.26	6.3
																8.0	43.0		95.70	1.10	0.76		0.76		0.76		0.84	5.5		19.5		95.97	0.50	0.01		0.01		0.01		0.01	7.6
																9.0	42.0		95.70	1.10	1.34		1.34		1.34		2.21	7.6		21.0		95.52	0.95	0.53		0.53		0.53		0.63	6.6
																11.0	40.0		95.60	1.20	1.72		1.72		1.72		4.13	6.6		22.0		95.47	1.00	1.15		1.15		1.15		1.15	6.6
																13.0	38.0		95.30	1.50	1.05		1.05		1.05		3.15	6.6		23.0		95.37	1.10	1.30		1.30		1.30		1.79	6.6
																15.0	36.0		95.00	1.80	2.40		2.40		2.40		8.64	6.6		24.5		95.27	1.20	1.37		1.37		1.37		2.06	6.6
																17.0	34.0		94.80	2.00	2.79		2.79		2.79		11.16	7.6		25.5		95.32	1.15	1.17		1.17		1.17		1.68	6.6
																19.0	32.0		94.80	2.00	2.28		2.28		2.28		9.12	6.6		27.0		95.07	1.40	1.67		1.67		1.67		2.92	6.6
																21.0	30.0		94.70	2.10	2.42		2.42		2.42		10.16	6.6		28.0		95.17	1.30	1.56		1.56		1.56		2.03	6.6
																23.0	28.0		95.10	1.70	3.17		3.17		3.17		10.78	6.6		29.0		95.27	1.20	1.77		1.77		1.77		2.12	7.6
																25.0	26.0		95.00	1.80	2.60		2.60		2.60		9.36	6.6		30.0		94.77	1.70	1.98		1.98		1.98		3.37	6.6
																27.0	24.0		95.00	1.80	2.00		2.00		2.00		7.20	6.6		31.0		95.07	1.40	2.04		2.04		2.04		2.86	6.7
																29.0	22.0		95.40	1.40	2.19		2.19		2.19		6.13	6.6		32.0		95.07	1.40	2.08		2.08		2.08		2.91	6.6
																31.0	20.0		95.80	1.00	0.38		0.38		0.38		0.57	7.6		33.0		94.97	1.50	1.63		1.63		1.63		2.45	6.6
																32.0	19.0		95.80	1.00	0.54		0.54		0.54		0.54	7.6		34.0		94.87	1.60	1.80		1.80		1.80		2.88	7.6
																33.0	18.0		96.00	0.80	1.44		1.44		1.44		1.73	6.3		35.0		94.97	1.50	1.43		1.43		1.43		2.15	6.6
																35.0	16.0		96.30	0.50	0.64		0.64		0.64		0.48	6.3		36.0		94.87	1.60	1.59		1.59		1.59		2.54	6.6
																36.0	15.0		96.30	0.50	0.76		0.76		0.76		0.38	6.3		37.0		95.17	1.30	0.25		0.25		0.25		0.33	6.6
																37.0	14.0		96.00	0.80	-0.17		-0.17		-0.17		-0.14	3.6		38.0		95.37	1.10	0.12		0.12		0.12		0.13	6.6
																38.0	13.0		96.30	0.50	-0.21		-0.21		-0.21		-0.11	3.6		39.0		95.47	1.00	1.04		1.04		1.04		1.04	6.6
																39.0	12.0		96.25	0.55	-0.10		-0.10		-0.10		-0.06	3.6		40.0		95.67	0.80	1.60		1.60		1.60		1.60	6.6
																40.0	11.0		96.35	0.45	0.04		0.04		0.04		0.02	9.9		41.5		95.77	0.70	1.82		1.82		1.82		1.91	7.6
															LEW	41.0	10.0		96.50	0.30	0.41		0.41		0.41		0.06	9.9		43.0		95.87	0.60	1.47		1.47		1.47		1.32	5.5
																42.3	8.7	13.60	97.26								9.9		44.5		95.47	1.00	0.60		0.60		0.60		0.75	5.3
																44.0	7.0	13.45	97.41								9.9	REW	45.5		96.47	0.00	0.00		0.00		0.00		0.00	7.7
																45.5	5.5	13.29	97.57								9.9	RWP	53.2											
																46.5	4.5	13.17	97.69								9.9													
																47.5	3.5	13.33	97.53								7.7													
																48.2	2.8	11.57	99.29								7.7													
																49.7	1.3	11.11	99.75								7.7													
															LWP	51.0	0.0	10.19	100.67								7.7													



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QARD 260.0
QARD 280.0
QARD 300.0
QARD 320.0
QARD 340.0
QARD 360.0
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    1000.0  0.097.51  1.996.57  3.396.12  4.396.20  5.396.17  6.896.02
    1000.0  8.395.65  9.395.26  9.994.67 10.192.12 11.392.32 13.392.32
    1000.0 15.392.22 17.392.32 19.392.32 20.392.57 23.391.82 25.391.72
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    1000.0 35.390.42 36.390.82 37.390.72 38.390.72 39.390.72 41.392.02
    1000.0 42.391.02 44.391.02 45.391.02 46.391.02 47.391.02 48.091.22
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    1000.0 54.494.82 55.292.15 55.895.12 56.895.34 57.694.93 58.395.32
    1000.0 58.796.57 59.396.97 60.396.19 61.396.62
NS  1000.0       9.9       9.9       9.9       9.9       9.9       7.7
NS  1000.0       7.7       7.7       7.7       7.7 0.4   5.5       5.5
NS  1000.0       6.5       6.5       8.8 .045  6.6       8.8       6.6
NS  1000.0       6.7 0.22  7.7 0.35  7.7       7.7       7.7       7.7
NS  1000.0       6.6       6.6       6.6       7.7       7.6       7.7
NS  1000.0       7.7       6.6       6.6       7.6       7.6       7.6
NS  1000.0       7.6       5.3       5.3       7.7       7.7       7.7
NS  1000.0       7.7       7.7       7.7       7.7       7.7       7.7
NS  1000.0       7.7       7.7       7.7       7.7
CAL11000.0     92.72      81.5
VEL11000.0                                              0.29 0.04 1.22
VEL11000.0 0.69 0.68 0.71 2.40 3.09 3.44 2.92 0.57 0.16 3.71 3.54 3.67
VEL11000.0 3.67 1.29 1.05 0.86-0.08 0.57 1.60 3.24 3.47 0.07-0.24 0.29
VEL11000.0 1.25 1.49 0.57-0.06
VEL11000.0
CAL21000.0     92.27      41.5
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
CAL31000.0     94.05     360.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
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    NF Spargue at FSB SP11 07/01/93
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QARD 300.0
QARD 320.0
QARD 340.0
QARD 360.0
XSEC1000.0      0.00 1.0     93.99   0.0258
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    1000.0  9.296.88 10.895.84 11.795.53 12.494.75 13.094.44 14.294.34
    1000.0 16.293.84 17.293.94 19.293.94 20.293.54 21.294.34 23.293.84
    1000.0 25.293.64 27.293.34 29.293.54 31.293.14 33.293.94 35.293.44
    1000.0 37.293.14 39.293.14 41.293.94 43.293.94 44.293.64 45.293.64
    1000.0 46.293.64 47.293.84 48.293.79 48.993.84 49.094.87 49.896.25
    1000.0 50.696.08 51.294.88 52.094.99 52.795.13 53.095.86 54.296.05
    1000.0 55.296.72 56.296.85 57.297.18 58.297.58
NS  1000.0       9.7       9.7       9.7       9.7       9.7       9.7
NS  1000.0       9.7       9.7       9.7       9.7       7.6       6.7
NS  1000.0       6.6       6.6       6.7 .15   6.6       6.6       6.6
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NS  1000.0       7.7       7.7       9.9       9.9       9.9       9.9
NS  1000.0       9.9       9.9       9.9       9.9
WSL 1000.0     93.88     94.05     94.14     94.23     94.29     94.35
WSL 1000.0     94.41     94.46     94.51     94.55     94.60     94.66
WSL 1000.0     94.71     94.76     94.80     94.85     94.91     94.96
WSL 1000.0     95.01     95.06     95.12     95.17     95.23     95.29
WSL 1000.0     95.40     95.52     95.64     95.77     95.90     96.04
CAL11000.0     94.44      81.5
VEL11000.0                                                        0.00 0.55
VEL11000.0 2.65 2.22 2.99 0.40 1.21 3.15 1.93 2.15 2.83 3.46 2.87 3.33
VEL11000.0 2.38 2.50 2.65 4.39 3.54 2.51-0.51-0.46 0.24 1.33
VEL11000.0
CAL21000.0     94.23      41.5
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
CAL31000.0     95.94     360.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
ENDJ
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    NF Spargue at FSB SP11 07/01/93
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QARD  30.0
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    1000.0 49.097.11 50.097.60 51.097.94
NS  1000.0       7.7       7.7       7.7       7.7       9.9       9.9
NS  1000.0       9.9       9.9       9.9       9.9       3.6       3.6
NS  1000.0       3.6       6.3       6.3       6.3 .3    7.6 .45   7.6
NS  1000.0       6.6       6.6       6.6 .115  6.6       6.6       6.6
NS  1000.0       7.6       6.6 .22   6.6       6.6       7.6       5.5
NS  1000.0       5.3       7.7       7.7       7.7       7.9 .4    7.9
NS  1000.0       7.9       7.9       7.9
CAL11000.0     96.80      81.5
VEL11000.0                                          0.41 0.04-0.10-0.21
VEL11000.0-0.17 0.76 0.64 1.44 0.54 0.38 2.19 2.00 2.60 3.17 2.42 2.28
VEL11000.0 2.79 2.40 1.05 1.72 1.34 0.76 0.30 0.02-0.05-0.12 0.00
VEL11000.0              9
CAL21000.0     96.47      41.5
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
CAL31000.0     98.09     360.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
ENDJ
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