

Delmar ESP Surface Buoy 100m Deployment Nov-2015 32N55.810, 117W18.990 Recovery 2016					
Source: 12-Nov-2015 11:44:31, ...\\Projects\\Paul's m-files\\Del Mar\\dmar1_MBARI_AZFP.cfg					
Author: 12-Nov-2015 11:44:38, pchua@(PCWIN64)					
depth (incl. stretch)	component	S/N description	rope # & Length	Distance from Upper / Lower rope end	in/out of water comment
32N55.81, 117W18.99			!!! Check for Cotter Pins !!!	Nov-2015	2016

		Yellow Light Iridium #300034012197210 IP 166.136.128.160 Vaisalla SN#_____			
0.0 m	Seaward Buoy	WH SN#_____			UTC
	MET				
	SC	SC SN#_____ / ID_____			
	ADCP	OX #_____			
		FL #_____			
		ATM-885 #_____ ID_____			
		Seawater Ground			
		10.5m Stretch Hose	#1 13.8m EM Stretch Hose		
17.4 m	Frame	MBARI ESP			
		PL 3t 3/4"	AS 5t 3/4"		
		chain 1.0m	AS 5t 3/4"		
		5/8" MR			
19.7 m	Load Cell	PL 3t 3/4"	AS 5t 3/4"		
		PL 3t 3/4"	AS 5t 3/4"		
20.6 m	Data Logger	Load Cell Controller #2 68m	AS 5t 3/4"		
		SB44 SN_____ / ID_____	AS 5t 3/4"		
			inductive bypass		
23.6 m	Data Logger	Fish Tag Receiver		3.5	
		SBE44 #_____ / ID_____		64.5	
24.1 m	SC-IM	Old SeacatSN#_____		4.0	
		SB44 SN_____ / ID_____		64.0	
32.1 m	SC-IM	SN#_____ ID_____		12.0	
		OX #_____		56.0	
		FL #_____			
42.1 m	MC-IM	SN#_____ ID_____		22.0	
				46.0	
57.1 m	MC-IM	SN#_____ ID_____		37.0	
				31.0	
72.1 m	SC-IM	Old SeacatSN#_____		52.0	
		SB44 SN_____ / ID_____		16.0	
87.1 m	SC-IM	SC #_____ / ID_____		67.0	
		Optode #_____		1.0	
		#2 bottom	AS 5t 3/4"		
		PL 3t 3/4"	AS 5t 3/4"		
89.1 m	Frame	AZFP NOAA NMFS SN_____			lower Seawater ground
		PL 3t 3/4"	AS 5t 3/4"		
		Swivel 5t	AS 5t 3/4"		
		PL 3t 3/4"	AS 5t 3/4"		
90.9 m	Pig lead		AS 5t 3/4"		
	45 kg dry		AS 5t 3/4"		
	41 kg wet	36m at bottom	AS 5t 3/4"		
100.0 m	Anchor	chain 45.0m	AS 5t 3/4"		
	1250 kg dry	5/8" MR			
	1091 kg wet				

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Element List			

Code	Count	Description	Label	Weight in air	/	water
=====						
Components						
33	14	3/4" BTAS 4.7t	AS 5t 3/4"	17.2 kg		15.0 kg
53	7	3/4" pear link 2.7t	PL 3t 3/4"	6.0 kg		5.2 kg
94	1	SS Swivel 5t	Swivel 5t	6.2 kg		5.3 kg
301	2	Instrument Frame	Frame	130.0 kg		90.0 kg
331	4	Seacat 16plus IM	SC-IM	42.8 kg		39.2 kg
336	2	MicroCAT IM37	MC-IM	7.6 kg		5.6 kg
380	1	Load Cell	Load Cell	5.0 kg		3.0 kg
381	2	Data Logger	Data Logger	30.0 kg		16.0 kg
420	1	Buoy + Bridle + RDI-WH 300	Seaward Buoy	1600.0 kg		-0.0 kg
=====						
Components weight:				1844.8 kg		179.3 kg
=====						
Ropes						
104	68m	3/8" 3x19 NILSPIN insulated	3/8" ins	30.3 kg		21.6 kg
117	12m	StretchHose	EM Stretch H	61.5 kg		12.3 kg
182	46m	Mooring chain 5/8", 4.0t	5/8" MR	230.0 kg		200.1 kg
=====						
Ropes weight:				321.8 kg		234.0 kg
=====						
Summary						
=====						
		Components		1844.8 kg		179.3 kg
		Ropes		321.8 kg		234.0 kg
520	1	Anchor variable	Anchor	1250.0 kg		1090.8 kg
526	1	Pig variable lead	Pig lead	45.0 kg		41.0 kg
=====						
Mooring total weight:				3461.7 kg		1545.0 kg

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Rope List		

#	Code	Length	Label	Weight in air	/	water
1	117	14m	StretchHose	69.0 kg		13.8 kg
	182	1m	Mooring chain 5/8", 4.0t	5.0 kg		4.3 kg
2	104	68m	3/8" 3x19 NILSPIN insulated	30.3 kg		21.6 kg
	182	45m	Mooring chain 5/8", 4.0t	225.0 kg		195.7 kg

Symmetric Marker: 14

#	Length	Type	Position of Markers [m]
2	68m	3/8" ins:	1, 4, 4, 12, 16, 22, 31, 37 46, 52, 56, 64, 65, 67

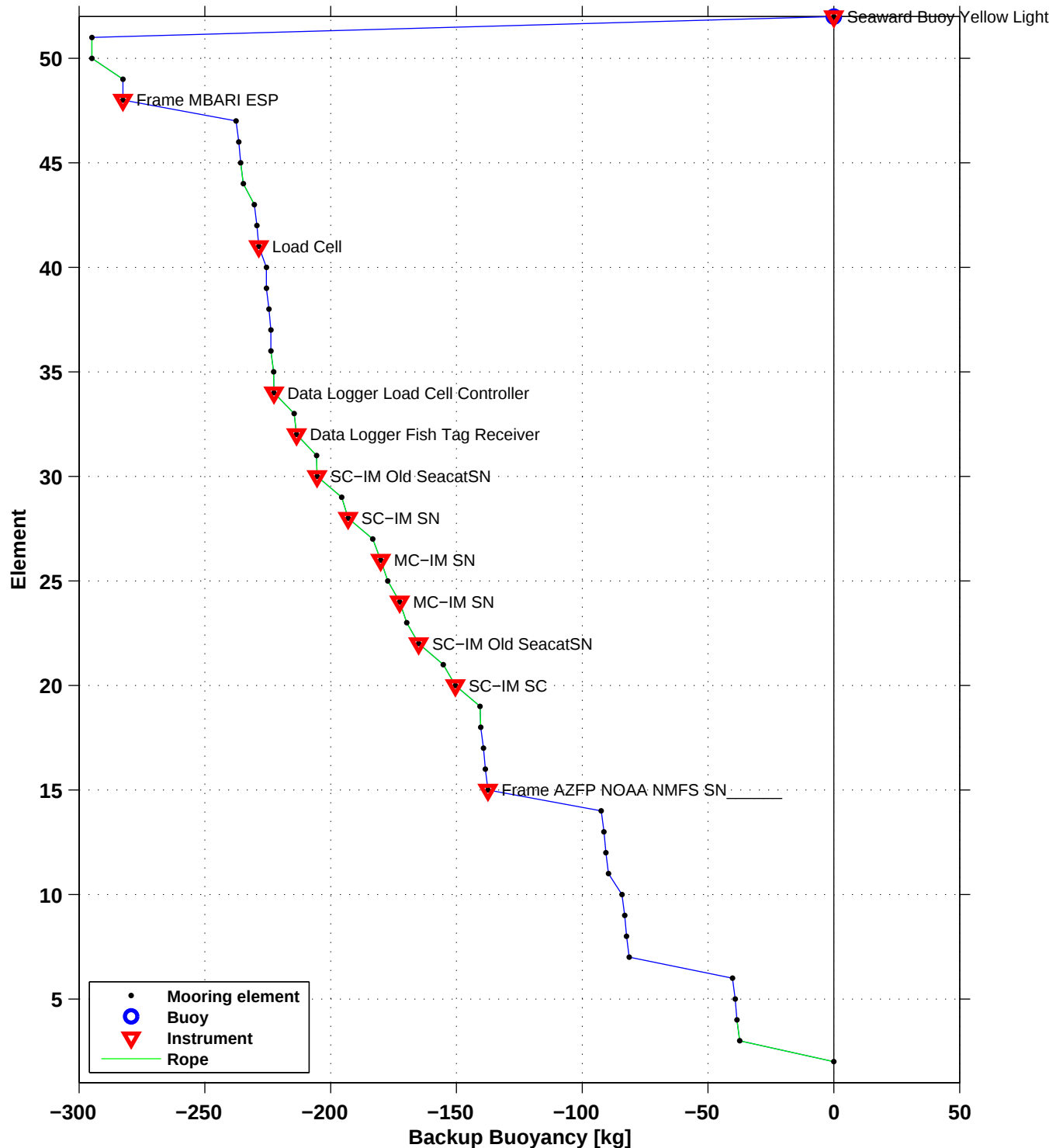
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Backup Buoyancy

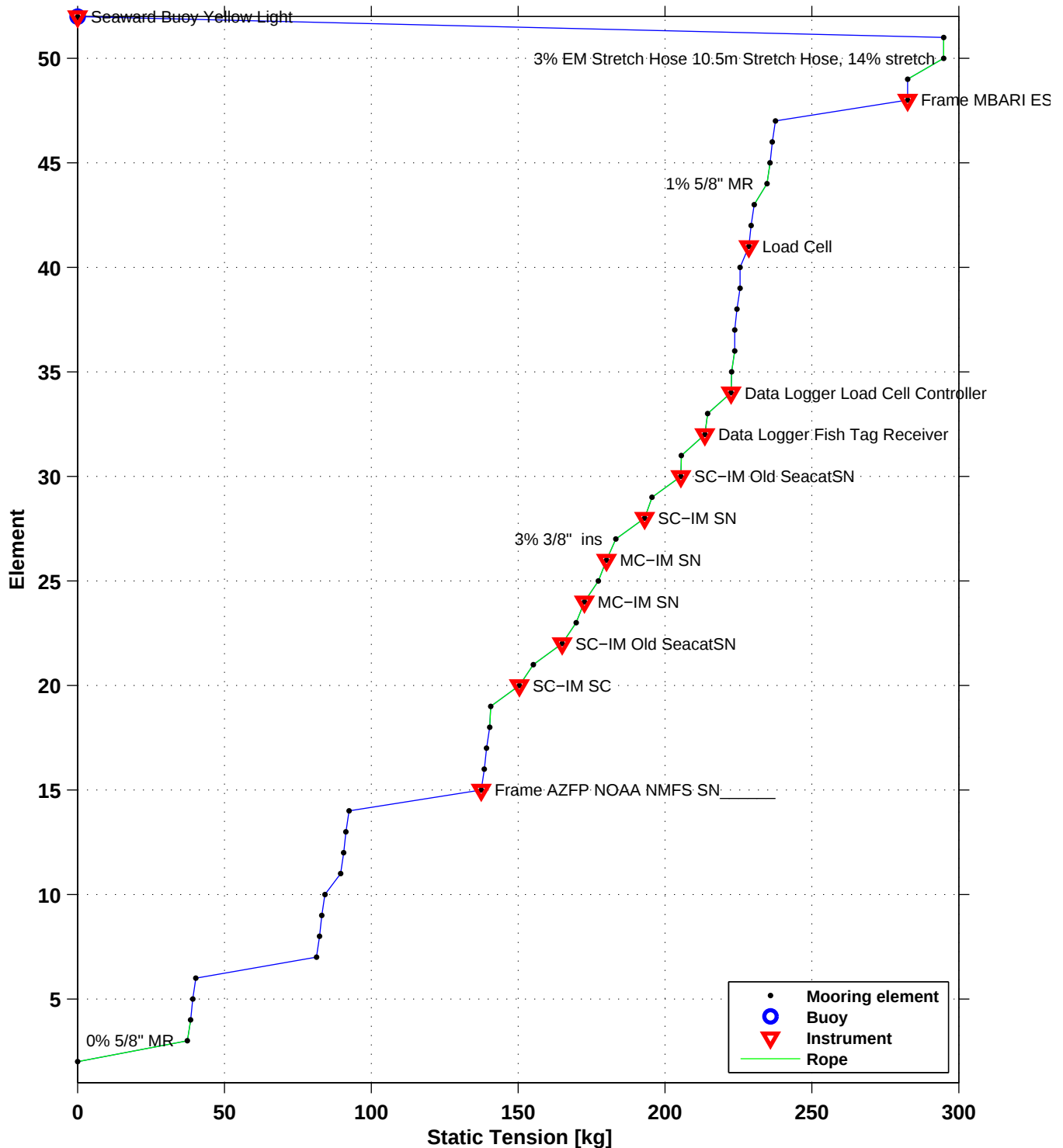


NO Current Vertical anchor load : 0 kg
 Wet safe anchor weight : 0 kg (150%, max: 500 kg)
 Wet / Dry Clump anchor weight : -0 kg / 1250 kg

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No Current Static Tension

NO Current Vertical anchor load: 0 kg
 Wet safe anchor weight: 0 kg (150%, max: 500 kg)
 Wet / Dry Clump anchor weight: -0 kg / 1250 kg

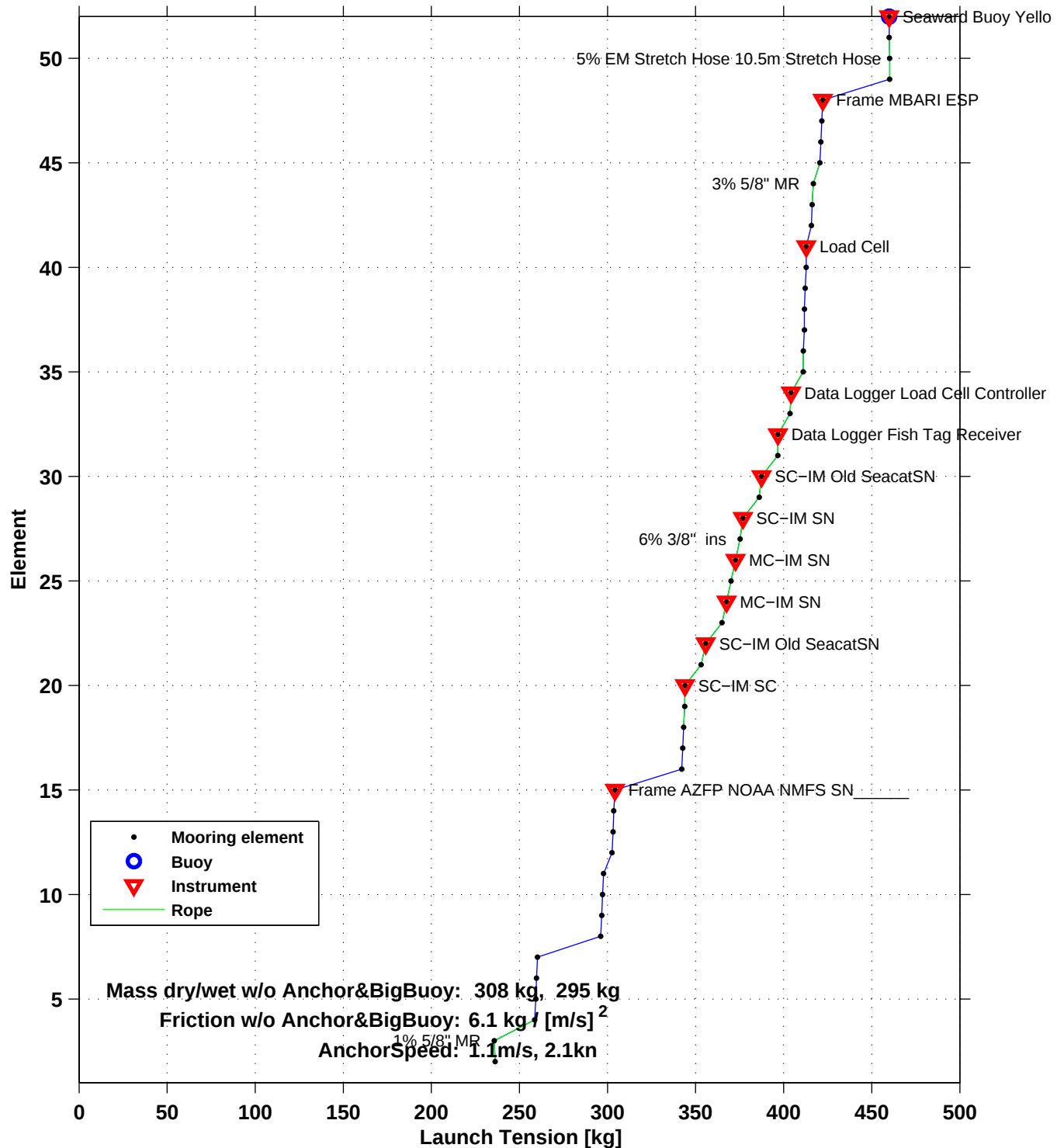
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Steady State Launch Tension

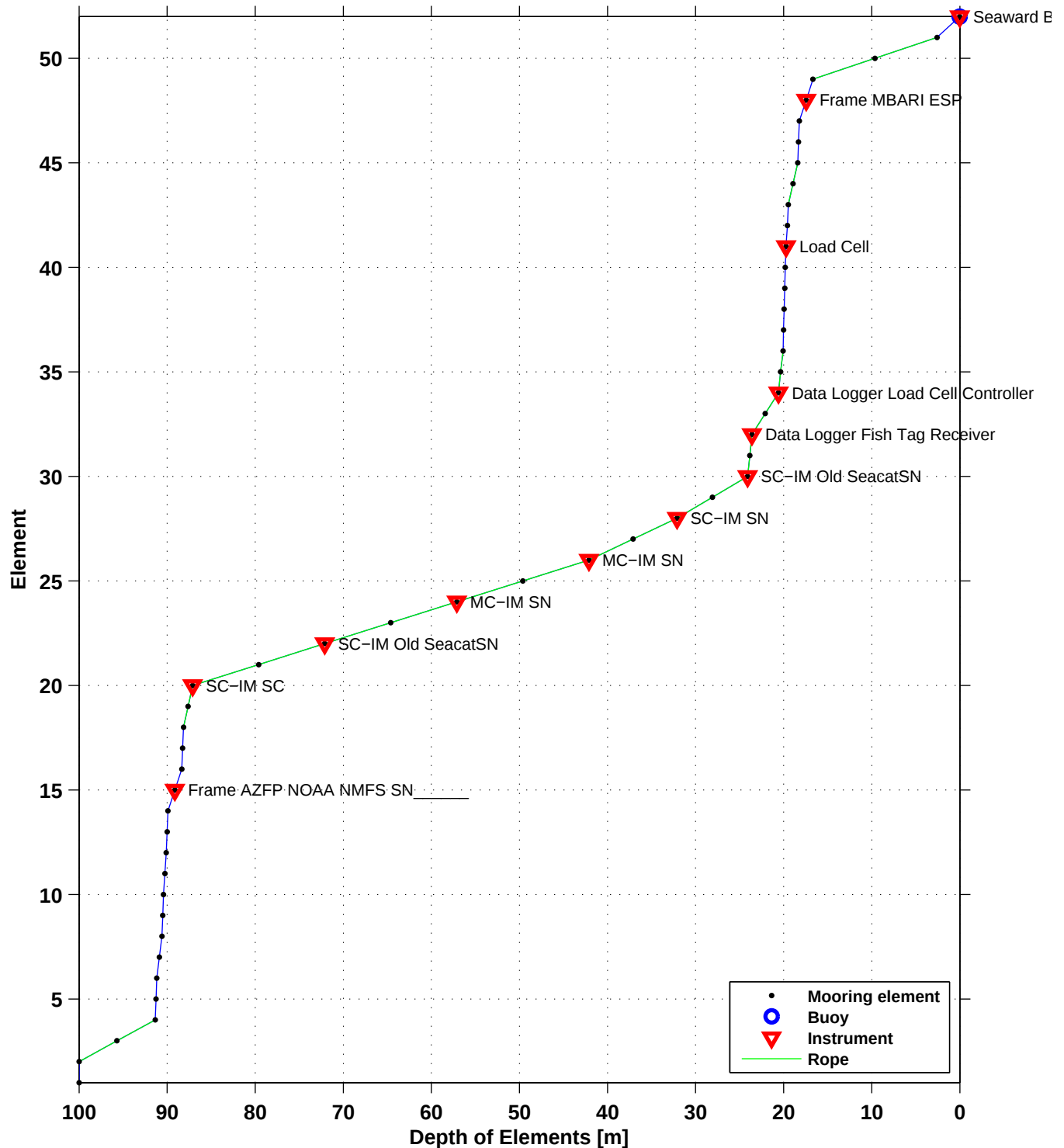


NO Current Vertical anchor load: 0 kg
 Wet safe anchor weight: 0 kg (150%, max: 500 kg)
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Depth of Elements

NO Current Vertical anchor load : 0 kg
 Wet safe anchor weight : 0 kg (150%, max: 500 kg)
 Wet / Dry Clump anchor weight : -0 kg / 1250 kg

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#	ID	Mooring Element	Length [m]	Buoy [kg]	Backup B. [kg]	Height [m]	Design Dpt [m]	Tension [kg]	[%]	Stretch [m]	[%]
52	420	Seaward Buoy MET	2.6	294.9	0.0	100.0	0.0	0.0	0.0	0.00	0.00
50	117	EM Stretch Hose	14.1	-12.3	-294.9	97.4	9.6	294.9	2.9	1.78	14.46
48	301	Frame	1.5	-45.0	-282.6	83.3	17.4	282.6	2.8	0.00	0.00
47	33	AS 5t 3/4"	0.1	-1.1	-237.6	81.8	18.2	237.6	1.3	0.00	0.00
46	53	PL 3t 3/4"	0.1	-0.7	-236.5	81.7	18.3	236.5	2.0	0.00	0.00
45	33	AS 5t 3/4"	0.1	-1.1	-235.8	81.6	18.4	235.8	1.3	0.00	0.00
44	182	5/8" MR	1.0	-4.3	-234.7	81.6	18.9	234.7	1.5	0.00	0.00
43	33	AS 5t 3/4"	0.1	-1.1	-230.4	80.6	19.5	230.4	1.3	0.00	0.00
42	53	PL 3t 3/4"	0.1	-0.7	-229.3	80.5	19.6	229.3	1.9	0.00	0.00
41	380	Load Cell	0.2	-3.0	-228.6	80.4	19.7	228.6	2.3	0.00	0.00
39	33	AS 5t 3/4"	0.1	-1.1	-225.6	80.2	19.9	225.6	1.3	0.00	0.00
38	53	PL 3t 3/4"	0.1	-0.7	-224.5	80.1	20.0	224.5	1.9	0.00	0.00
36	33	AS 5t 3/4"	0.1	-1.1	-223.7	80.0	20.1	223.7	1.2	0.00	0.00
35	104	3/8" ins	0.5	-0.2	-222.7	79.9	20.3	222.7	3.4	0.00	0.03
34	381	Data Logger	0.0	-8.0	-222.5	79.4	20.6	222.5	2.2	0.00	0.00
33	104	3/8" ins	3.0	-1.0	-214.5	79.4	22.1	214.5	3.3	0.00	0.03
32	381	Data Logger	0.0	-8.0	-213.6	76.4	23.6	213.6	2.1	0.00	0.00
31	104	3/8" ins	0.5	-0.2	-205.6	76.4	23.8	205.6	3.2	0.00	0.03
30	331	SC-IM	0.0	-9.8	-205.4	75.9	24.1	205.4	2.1	0.00	0.00
29	104	3/8" ins	8.0	-2.5	-195.6	75.9	28.1	195.6	3.0	0.00	0.03
28	331	SC-IM	0.0	-9.8	-193.1	67.9	32.1	193.1	1.9	0.00	0.00
27	104	3/8" ins	10.0	-3.2	-183.3	67.9	37.1	183.3	2.8	0.00	0.03
26	336	MC-IM	0.0	-2.8	-180.1	57.9	42.1	180.1	1.8	0.00	0.00
25	104	3/8" ins	15.0	-4.8	-177.3	57.9	49.6	177.3	2.7	0.00	0.03
24	336	MC-IM	0.0	-2.8	-172.5	42.9	57.1	172.5	1.7	0.00	0.00
23	104	3/8" ins	15.0	-4.8	-169.7	42.9	64.6	169.7	2.6	0.00	0.03
22	331	SC-IM	0.0	-9.8	-165.0	27.9	72.1	165.0	1.6	0.00	0.00
21	104	3/8" ins	15.0	-4.8	-155.2	27.9	79.6	155.2	2.4	0.00	0.02
20	331	SC-IM	0.0	-9.8	-150.4	12.9	87.1	150.4	1.5	0.00	0.00
19	104	3/8" ins	1.0	-0.3	-140.6	12.9	87.6	140.6	2.2	0.00	0.02
18	33	AS 5t 3/4"	0.1	-1.1	-140.3	11.9	88.2	140.3	0.8	0.00	0.00
17	53	PL 3t 3/4"	0.1	-0.7	-139.2	11.8	88.2	139.2	1.2	0.00	0.00
16	33	AS 5t 3/4"	0.1	-1.1	-138.5	11.7	88.3	138.5	0.8	0.00	0.00
15	301	Frame	1.5	-45.0	-137.4	11.6	89.1	137.4	1.4	0.00	0.00
14	33	AS 5t 3/4"	0.1	-1.1	-92.4	10.1	89.9	92.4	0.5	0.00	0.00
13	53	PL 3t 3/4"	0.1	-0.7	-91.4	10.0	90.0	91.4	0.8	0.00	0.00
12	33	AS 5t 3/4"	0.1	-1.1	-90.6	9.9	90.1	90.6	0.5	0.00	0.00
11	94	Swivel 5t	0.2	-5.3	-89.6	9.9	90.3	89.6	0.9	0.00	0.00
10	33	AS 5t 3/4"	0.1	-1.1	-84.2	9.6	90.4	84.2	0.5	0.00	0.00
9	53	PL 3t 3/4"	0.1	-0.7	-83.1	9.6	90.5	83.1	0.7	0.00	0.00
8	33	AS 5t 3/4"	0.1	-1.1	-82.4	9.4	90.6	82.4	0.5	0.00	0.00
7	526	Pig lead	0.5	-41.0	-81.3	9.4	90.9	81.3	1.4	0.00	0.00
6	33	AS 5t 3/4"	0.1	-1.1	-40.3	8.9	91.2	40.3	0.2	0.00	0.00
5	53	PL 3t 3/4"	0.1	-0.7	-39.2	8.8	91.3	39.2	0.3	0.00	0.00
4	33	AS 5t 3/4"	0.1	-1.1	-38.5	8.7	91.4	38.5	0.2	0.00	0.00
3	182	5/8" MR	8.6	-37.4	-37.4	8.6	95.7	37.4	0.2	0.00	0.00
2	33	AS 5t 3/4"	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.00	0.00
1	520	Anchor	0.0	0.0	NaN	0.0	100.0	0.0	0.0	0.00	0.00

Max.	35	3.4% Static Tension at:									
35	104	3/8" ins	0.5	-0.2	-222.7	79.9	20.3	222.7	3.4	0.00	0.03

Vertical anchor load :			0	kg							
Wet Clump Anchor weight :			-0	kg							
Safe Clump Anchor weight :			0	kg							

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Mass dry / wet w/o Anchor: 308 kg, 295 kg
 Drag / Friction w/o Anchor: 71.2 kg, 60.0 kg/[m/s]²
 Dry/Wet Clump Anchor weight: 1250 kg, -0 kg
 Steady State AnchorSpeed : 1.09 m/s, 2.1 kn