

Company: L-DEO - Lamont - Doherty Earth Observatory
Vessel: Marcus G. Langseth
Client: McIntosh / NSF

Project: MGL1708 - SHIRE

Area: North Island, New Zealand
Start Date: 1-Nov-17

Vessel Sensor Offsets

Towing Offsets

Towing Configuration

Acoustic Overhead

Gun Array Offsets

Streamer Front End

Streamer Tail End

Streamer Complete

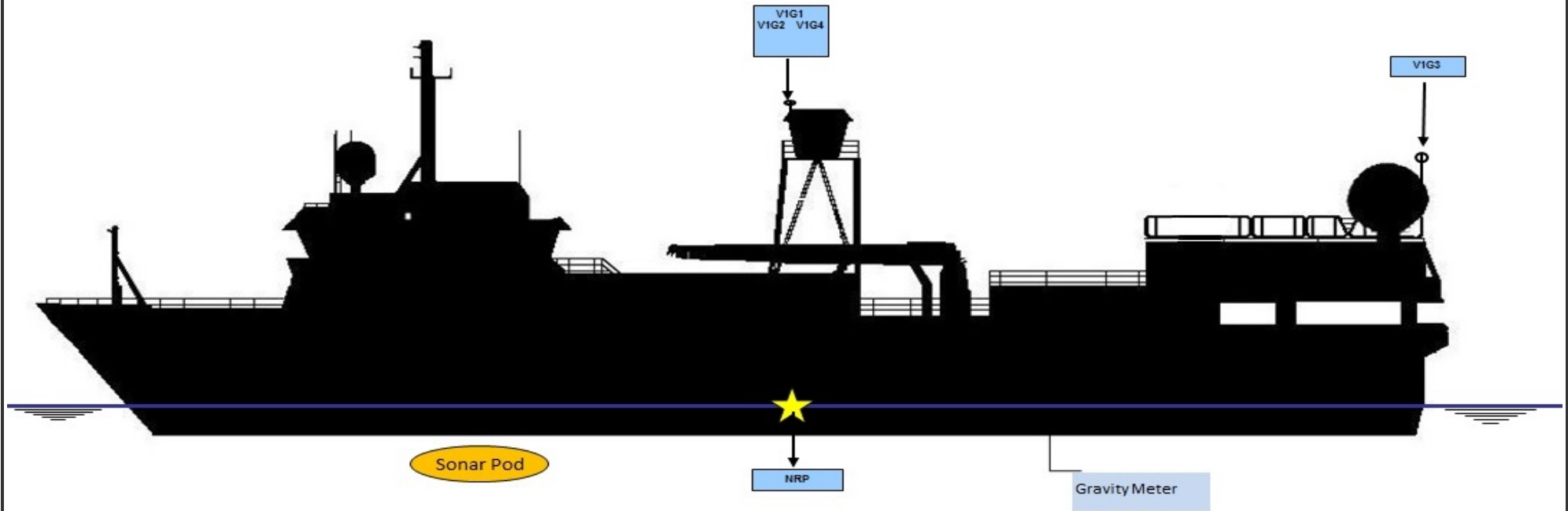
Hydrophone Offsets

Tailbuoy Offsets

Timing

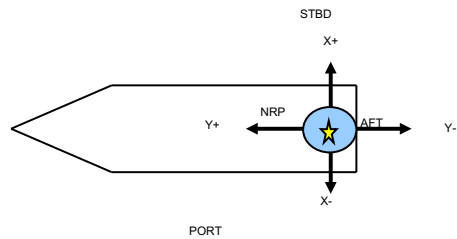


R/V Marcus G. Langseth - Vessel Sensor Offsets



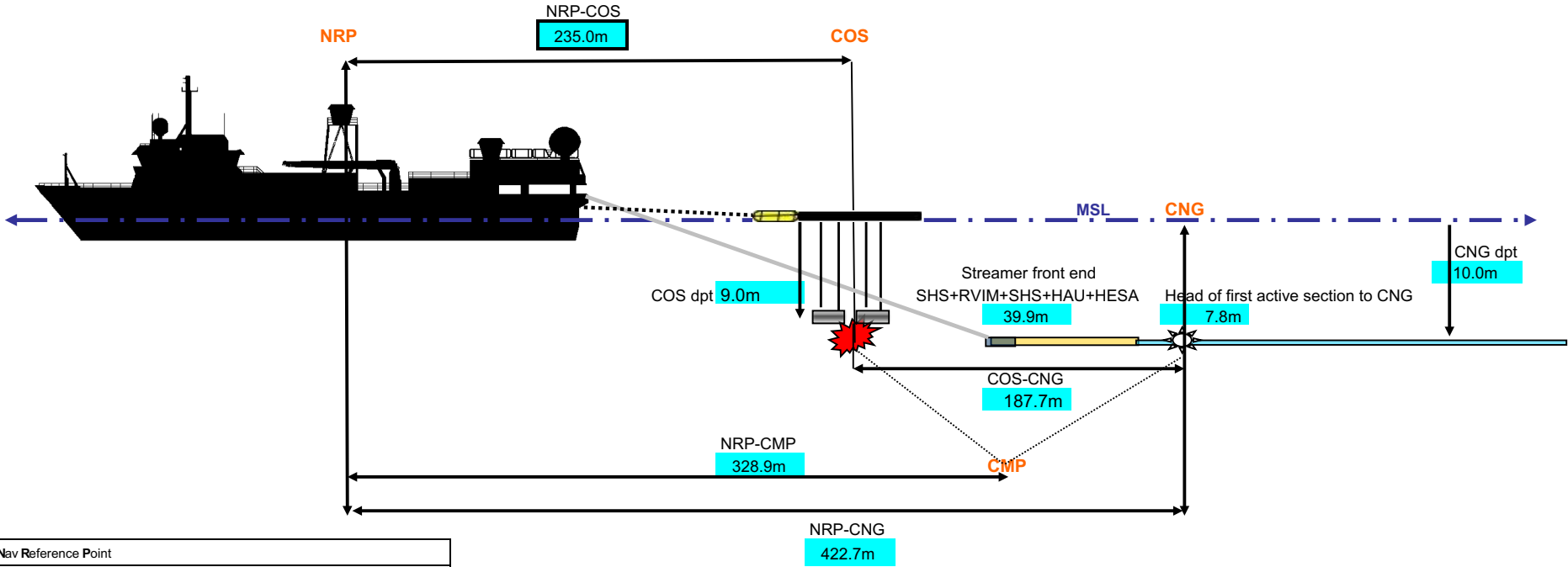
Negative values are above water line

All measurements in meters



		STBD/PORT (X)	FORE/AFT (Y)	UP/DOWN (Z)	
NRP	NAVIGATION REFERENCE POINT	0.00	0.00	0.00	
V1G1	C-Nav 3050	0.00	0.00	-16.90	
V1G2	SeaPath 200	0.00	1.50	-16.90	
V1G3	C-Nav 2000	-2.10	-29.20	-14.50	
V1G4	Pos MV	-1.30	1.20	-16.90	
V1R1	PosNet	-1.30	0.00	-16.90	
Sonar Pod	EM122 Knudsen ADCP	0.00	20.20	7.49	
	EM122 Center Beam offset (in Spectra)	0.00	13.4	7.49	
MRU	Seapath MRU	2.30	14.16	-4.30	
BGM	Bell Gravity Meter	0.00	-13.10	1.10	

R/V Marcus G. Langseth - Towing Offsets



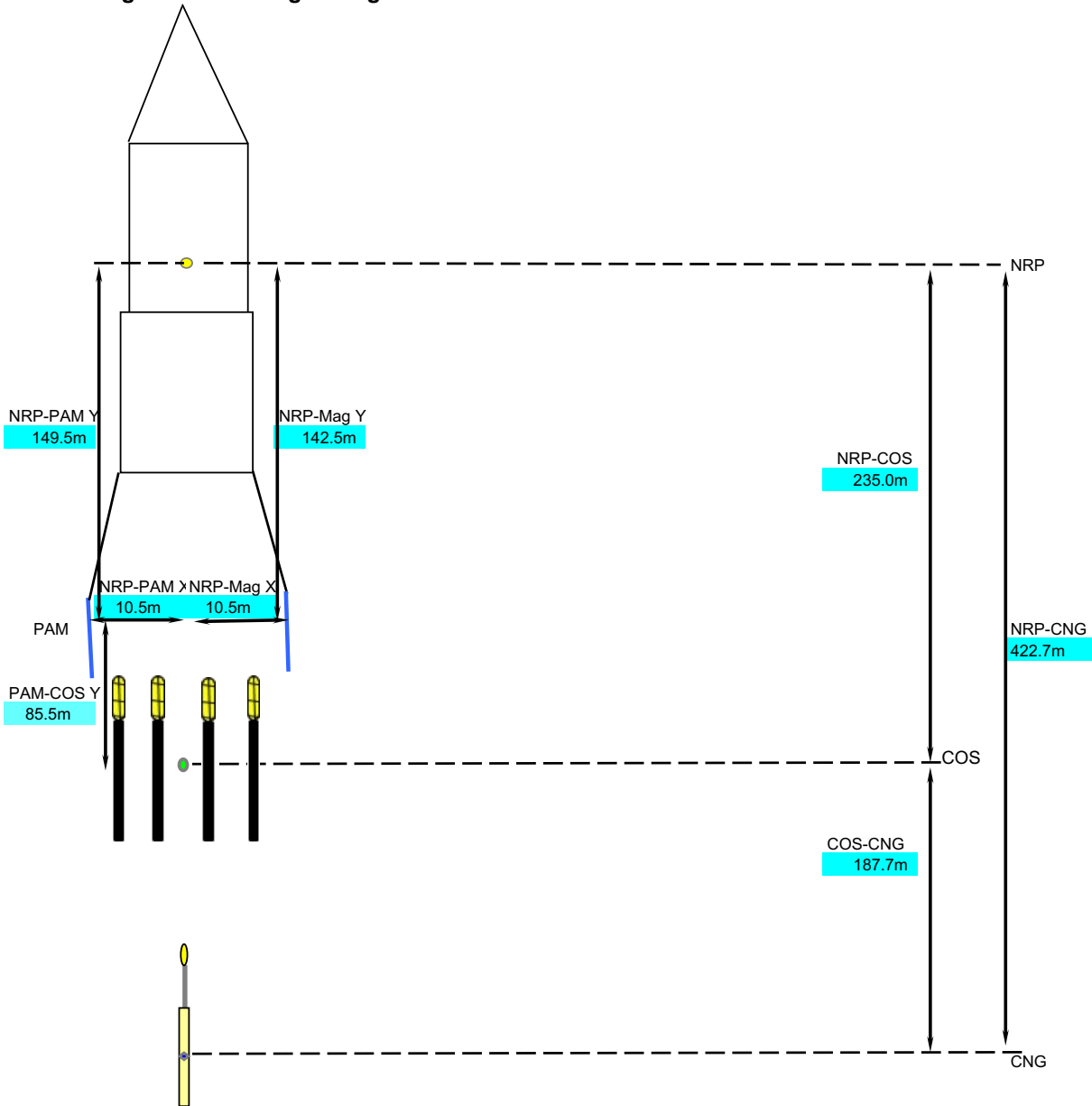
NRP	Nav Reference Point	
COS	Centre of Source	
CNG	Centre of Near Group	Trace # 1 Of S1
CMP	Common Mid-Point	
MSL	Mean Sea Level	
NRP-Stern	29.5m	
NRP-COS	235.0m	

All measurements in meters

Cell contents referenced from Config_offsets tab

R/V Marcus G. Langseth - Towing Configuration

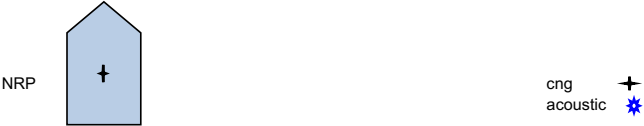
	# Streamers	Length	Channels	Spacing
SEAL	1	12600	1008	12.5m
# Gun Strings Used	4		Vol (in^3)	6600



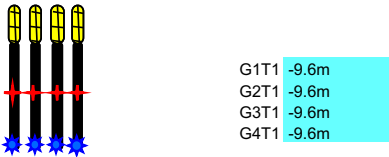
NOT to Scale

Cell contents referenced from Config_offsets tab

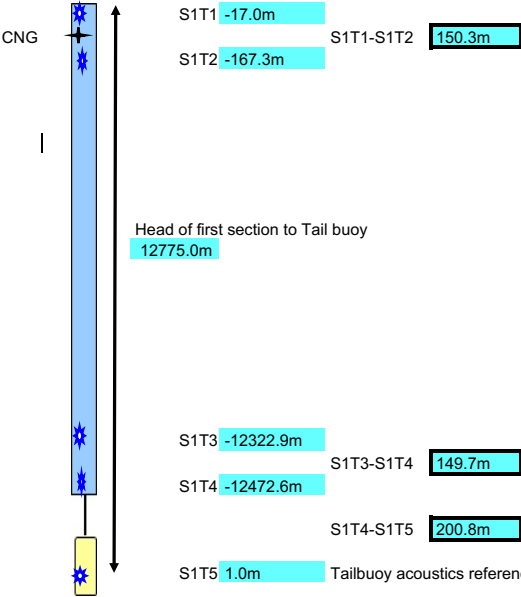
R/V Marcus G. Langseth - Acoustic Offsets



Source acoustic offsets are referenced to COS on individual gun string

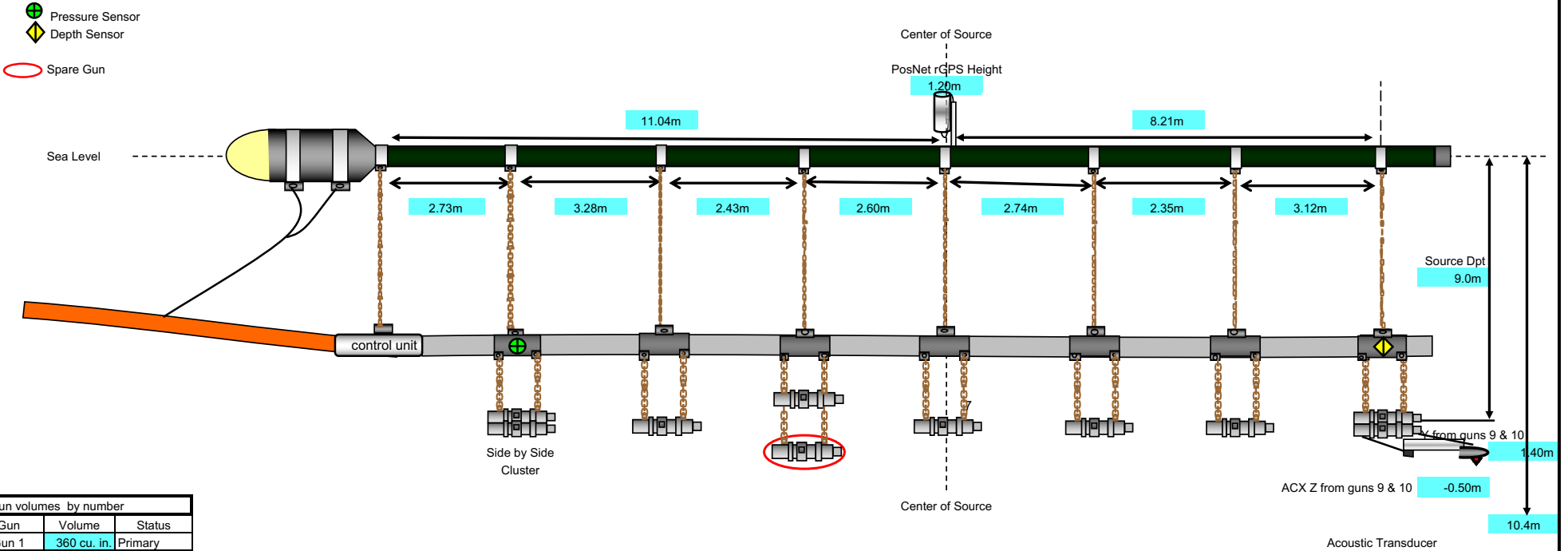


Streamer acoustic offsets are referenced to CNG on individual streamer



Cell contents referenced from Config_offsets tab

R/V Marcus G. Langseth - Gun Array Offsets



Gun volumes by number		
Gun	Volume	Status
Gun 1	360 cu. in.	Primary
Gun 2	360 cu. in.	Primary
Gun 3	40 cu. in.	Primary & Mitigation
Gun 4	180 cu. in.	Primary
Gun 5	180 cu. in.	Spare
Gun 6	90 cu. in.	Primary
Gun 7	120 cu. in.	Primary
Gun 8	60 cu. in.	Primary
Gun 9	220 cu. in.	Primary
Gun 10	220 cu. in.	Primary

Array total volume (without spares) is 6600 cu. in.
 Guns (1 & 2) in a horizontal cluster, (5 & 6) and (9 & 10) in a vertical cluster
 Gun clusters have 0.75m between guns and hang 0.95m from center of hanger

Total volume/string (without spare) 1650 cu. in.
 Horizontal Clusters are 1m from gun port to gun port
 Single guns hang from hanger 1.15m

All gun volumes, numbering, locations, and offsets were inspected and verified by Chief Source Mechanic.

All measurements in meters
 NOTE: drawing not to scale

Cell contents referenced from Config_offsets tab

R/V Marcus G. Langseth - Gun Configuration

DT = Depth Transducer
 ACX = Acoustic
 P = Pressure Sensor - located
 in front of gun's 1 & 2

Center of Source



Spare Gun

Gun Clusters

Guns 1 & 2 horizontal array

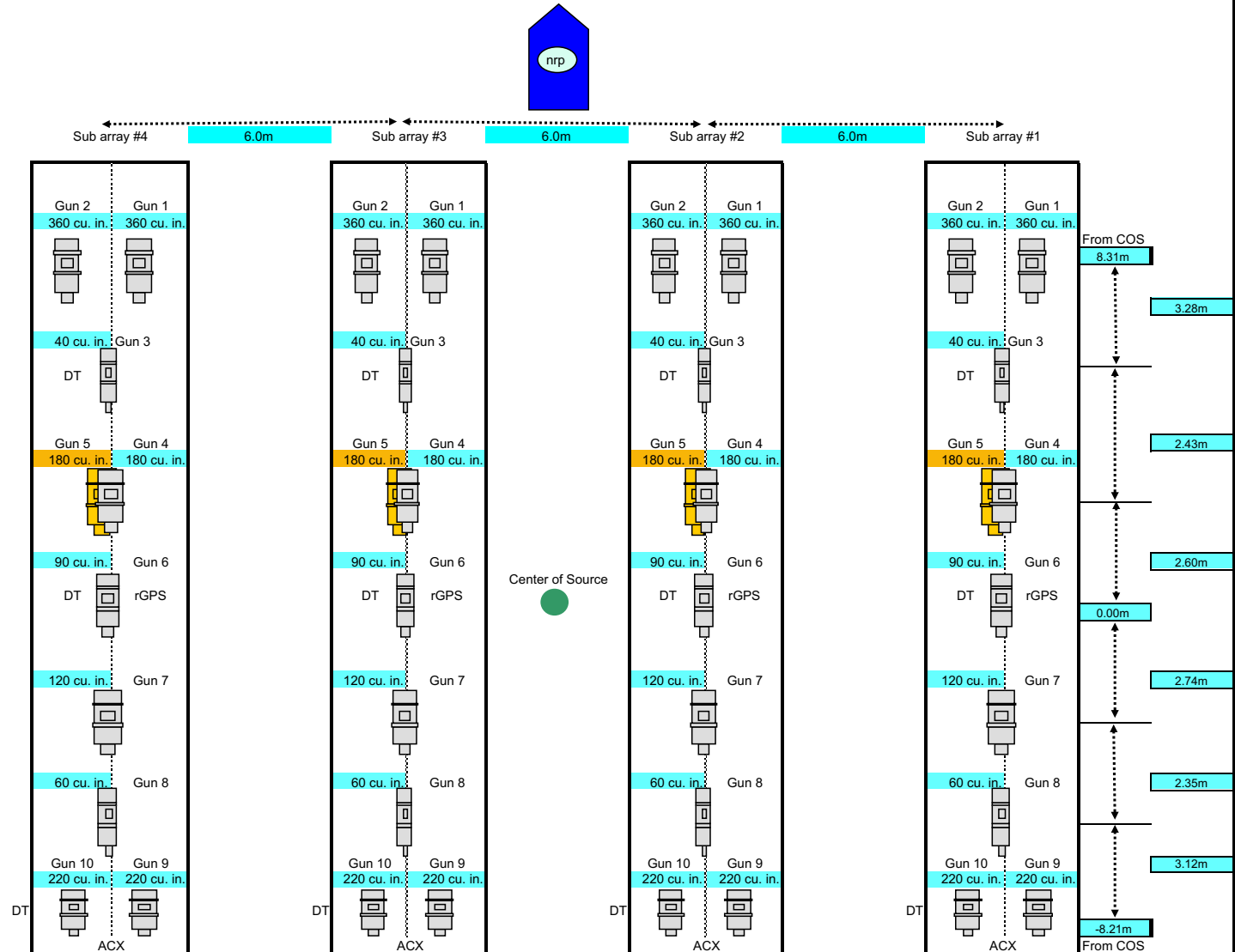
Guns 4 & 5 vertical array

Guns 9 & 10 horizontal array

Gun Offsets relative to Center of String

	X	Y
Gun 1	0.50m	8.31m
Gun 2	-0.50m	8.31m
Gun 3	0.00m	5.03m
Gun 4	0.00m	2.60m
Gun 5	0.00m	2.60m
Gun 6	0.00m	0.00m
Gun 7	0.00m	-2.74m
Gun 8	0.00m	-5.09m
Gun 9	0.50m	-8.21m
Gun 10	-0.50m	-8.21m

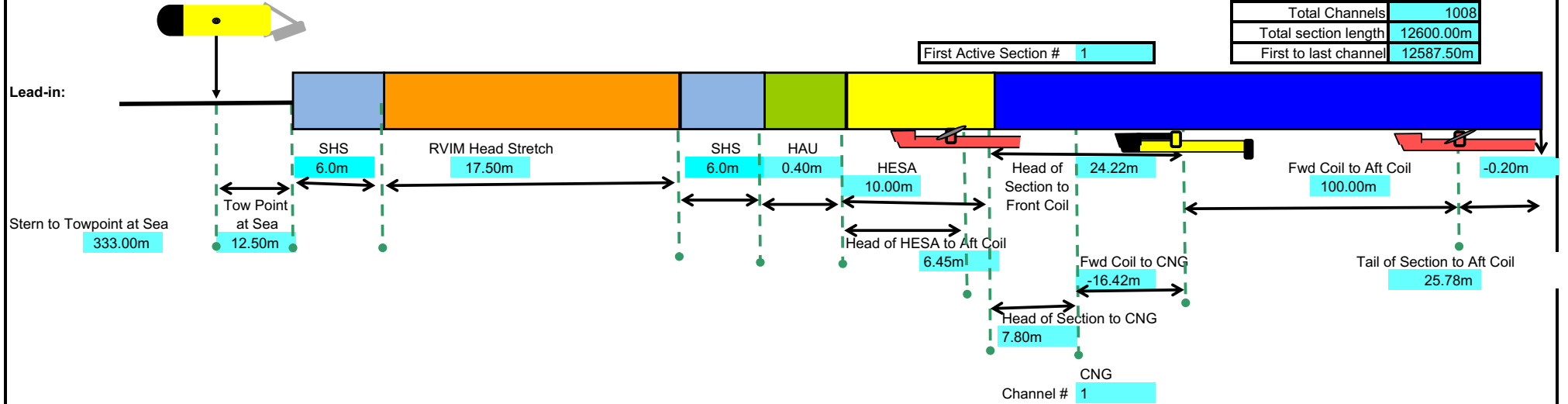
All measurements in meters



R/V Marcus G. Langseth - Streamer Front End

Total active sections	84
Total Channels	1008
Total section length	12600.00m
First to last channel	12587.50m

First Active Section # 1

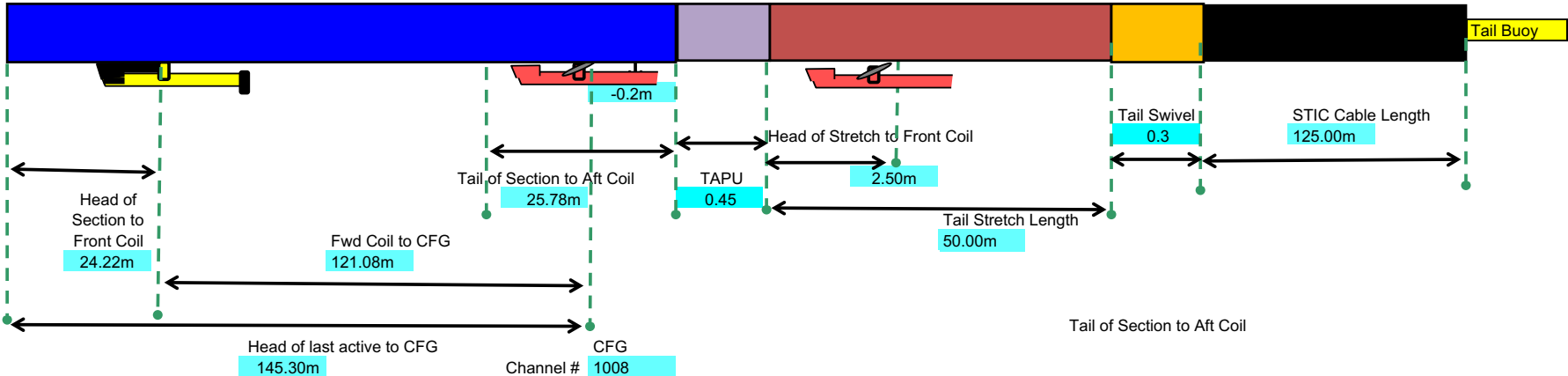


Cell contents referenced from Config_offsets tab

R/V Marcus G. Langseth - Streamer Tail End

Total active sections	84
Total Channels	1008
Total section length	12600.00m
First to last channel	12587.50m
CFG to TB RGPS	181.95m

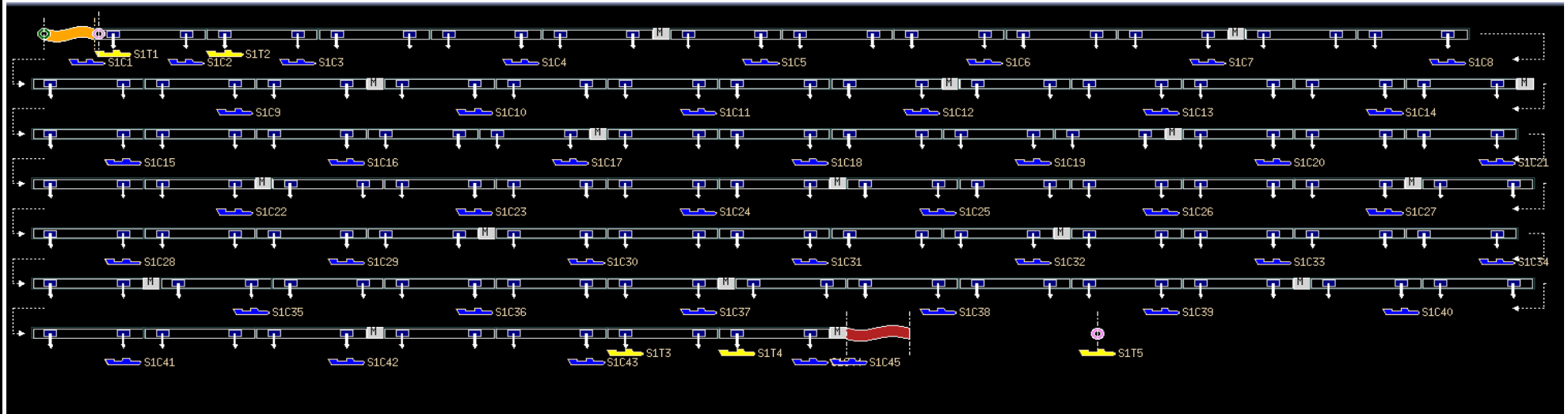
Last Active Section # 84



Cell contents referenced from Config_offsets tab

R/V Marcus G. Langseth - Streamer Complete

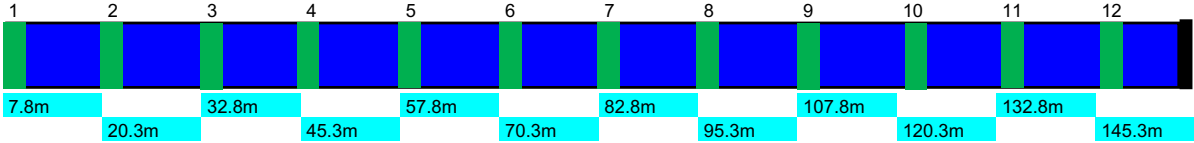
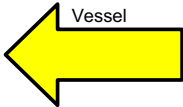
Total active sections	84
Total Channels	1008
Total section length	12600.00m
First to last channel	12587.50m



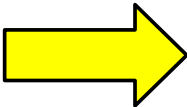
Cell contents referenced from Config_offsets tab

R/V Marcus G. Langseth - Hydrophone Offsets
Sercel 150meter SSAS

Number of SSAS Sections 84
Channels per active section 12
Total channels 1008

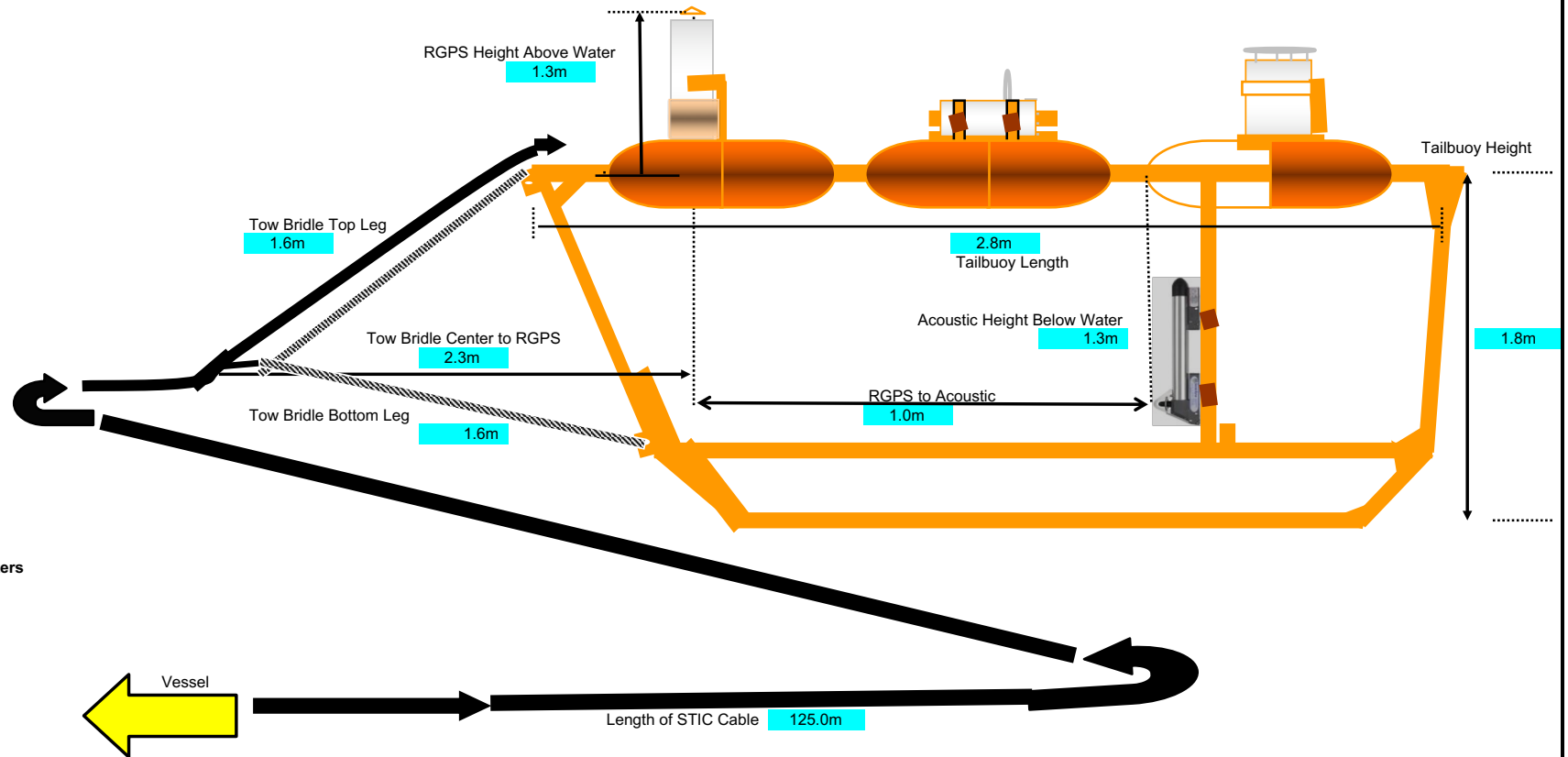


Tail buoy



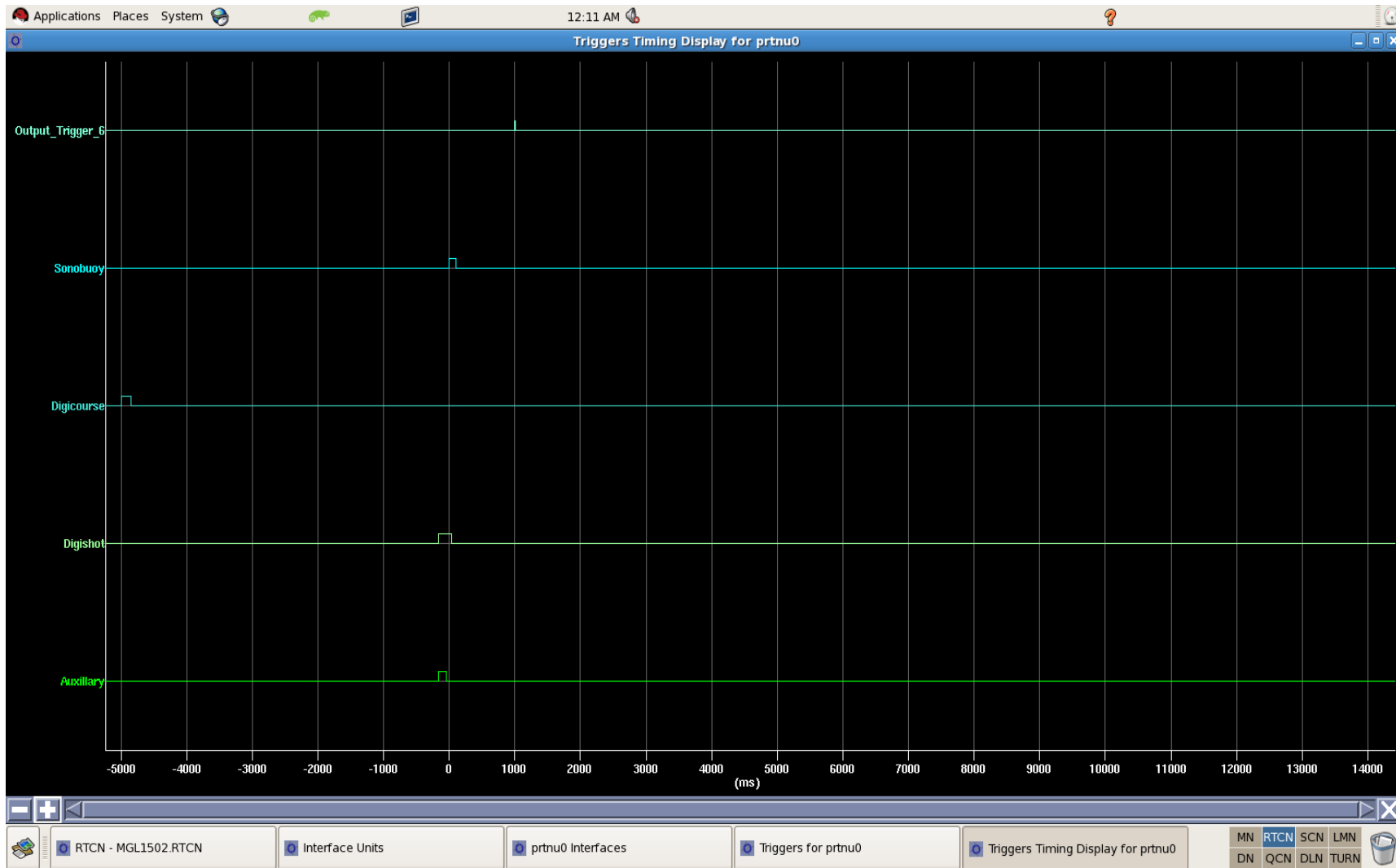
Cell contents referenced from Config_offsets tab

R/V Marcus G. Langseth - Tailbuoy



All measurements in meters

Cell contents referenced from Config_offsets tab



Job Description		
NRP to COS Y		235
NRP to COS X		0
Source Depth		
Swimmer Depth	# of swimmer sections	10
	# of channels	104
	CMG Channel #	1
	CPG Channel #	108
	MECS Swimmer	1
	Swimmer: swim to tow point or sea	333
	MECS Swimmer Cap.	0
	Gum volume total	6800
	Volume per string	1800
	# of gum used	36
	# Gum Strings	4
	gun string separation	6
	PRM Y - (outside of stern rail)	120
	PRM X - (outside of stern rail)	5
	Stem to MAG Y	113
	Stem to MAG X - (outside of stern rail)	3