

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

Project: MGL2204  
Area: Guerrero Gap, Mexico  
Start Date: 14-May-22

Vessel Sensor Offsets

Towing Offsets

Towing Configuration

Acoustic Overhead

Gun Array Offsets

Streamer Front End

Streamer Tail End

Streamer Complete

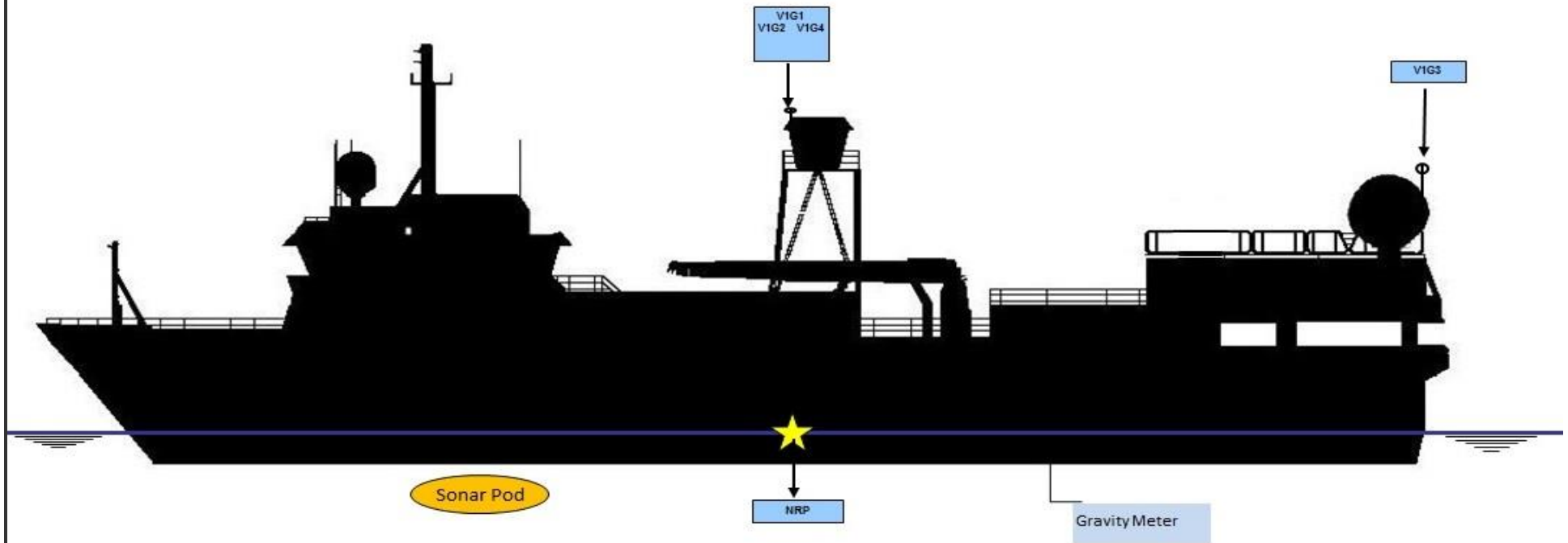
Hydrophone Offsets

Tailbuoy Offsets

Timing



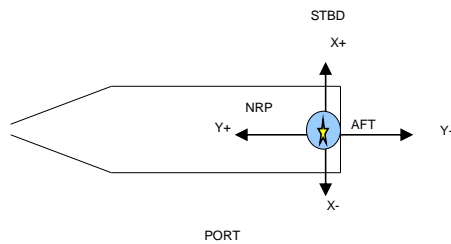
## R/V Marcus G. Langseth - Vessel Sensor Offsets



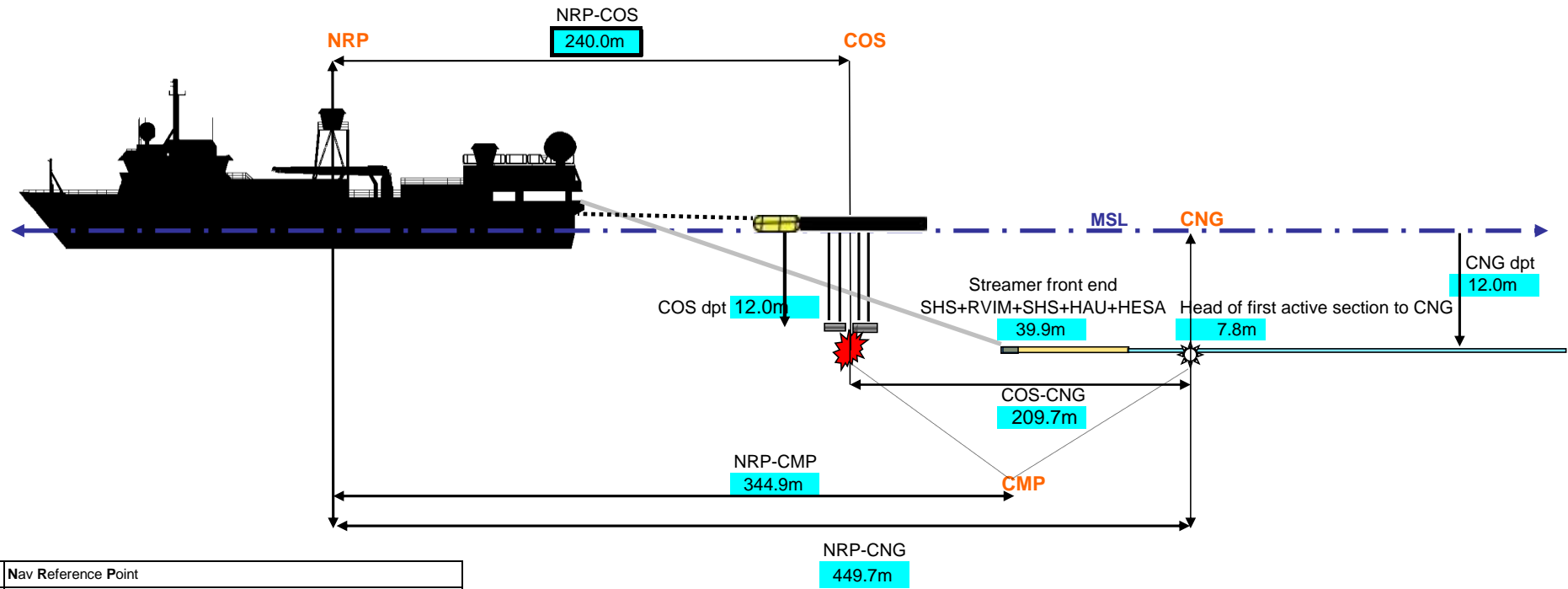
Negative values are above water line

All measurements in meters

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



## R/V Marcus G. Langseth - Towing Offsets



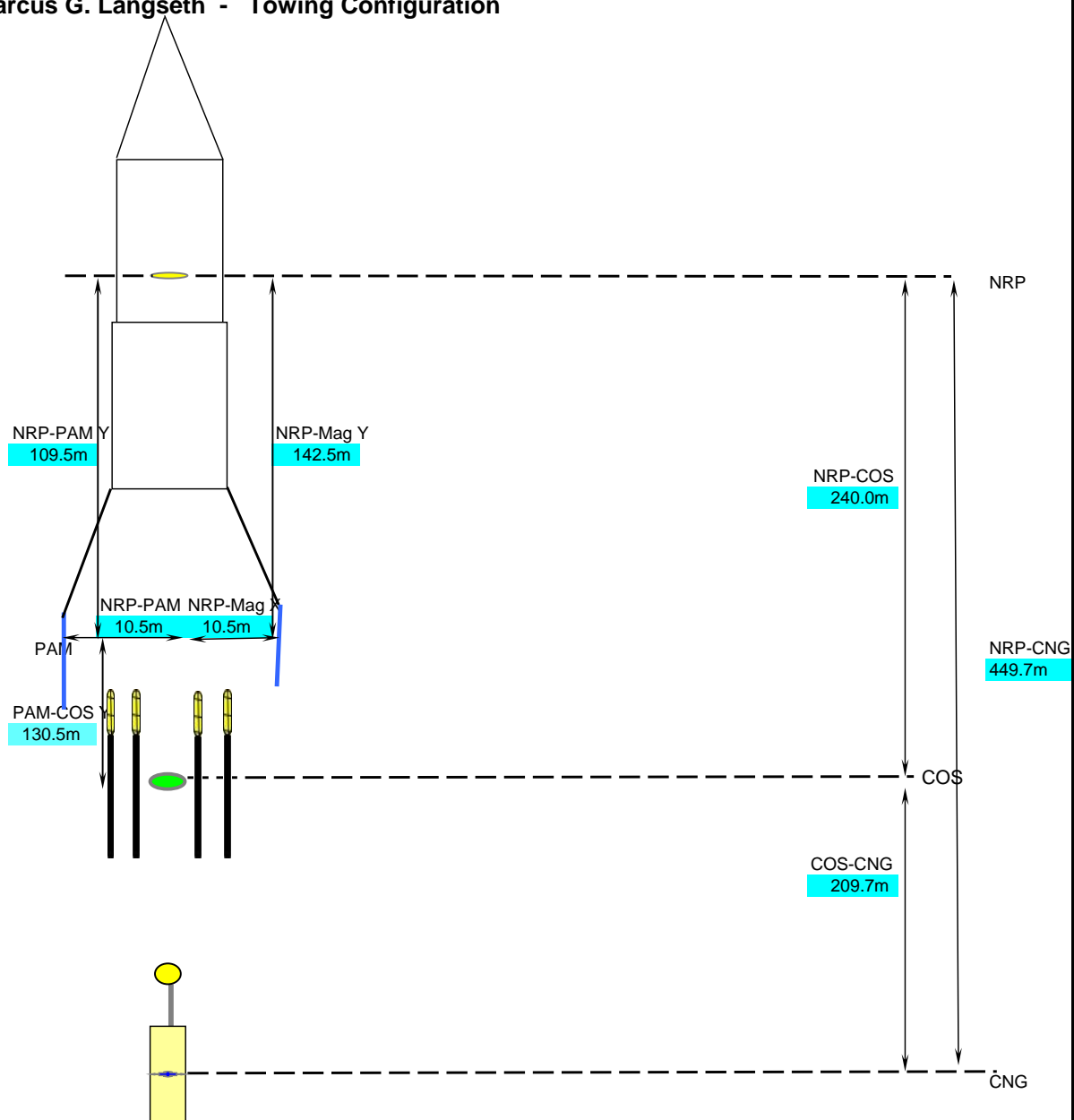
NRP	Nav Reference Point
COS	Centre of Source
CNG	Centre of Near Group
CMP	Common Mid-Point
MSL	Mean Sea Level
NRP-Stern	29.5m
NRP-COS	240.0m

All measurements in meters

Cell contents referenced from Config\_offsets tab

# R/V Marcus G. Langseth - Towing Configuration

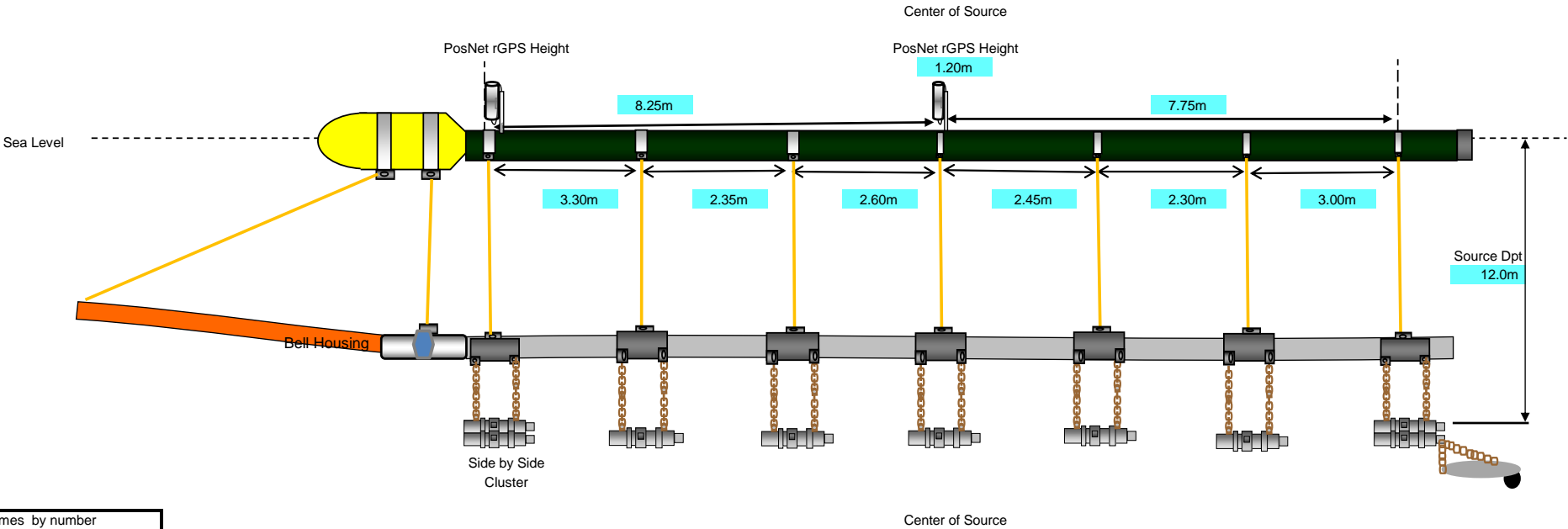
	# Streamers	Length	Channels	Spacing
SEAL	1	15000	1200	12.5m
# Gun Strings Used	4	Vol (in^3)	6600	



NOT to Scale

Cell contents referenced from Config\_offsets tab

R/V Marcus G. Langseth - 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	90 cu. in.	Primary
Gun 6	120 cu. in.	Primary
Gun 7	60 cu. in.	Primary
Gun 8	220 cu. in.	Primary
Gun 9	220 cu. in.	Primary

Array total volume (without spares) is 6600 cu. in. Total volume/string (without spare) 1650 cu. in.

Guns (1 & 2) & (8 & 9) in a horizontal cluster.

Gun clusters have 0.75m between guns and hang 0.95m from center of hanger

Horizontal Clusters are 1m from gun port to gun port

Single guns hang from hanger 1.15m

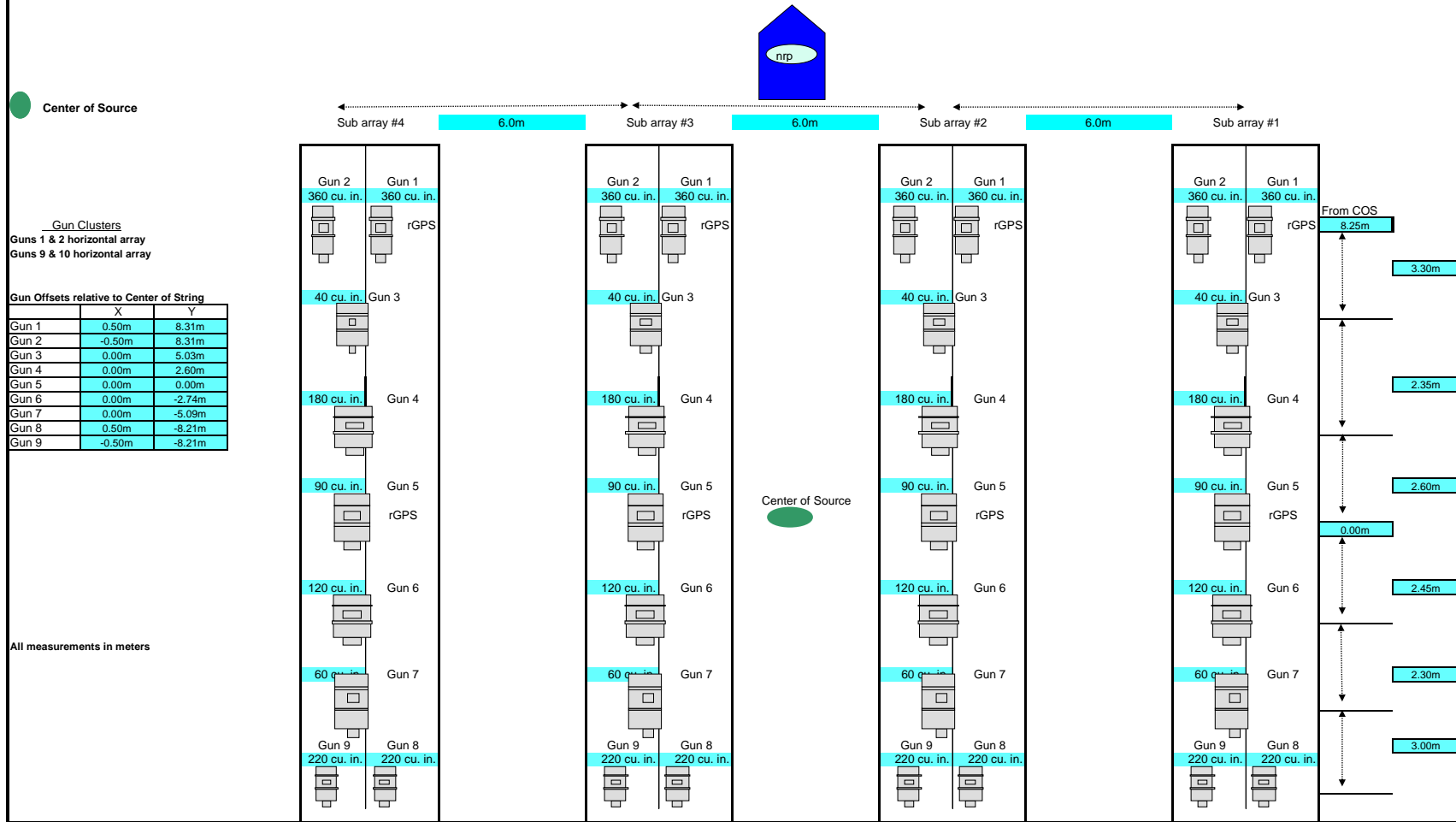
All gun volumes, numbering, locations, and offsets were inspected and verified by Chief Source Mechanic.

All measurements in meters

NOTE: drawing not to scale

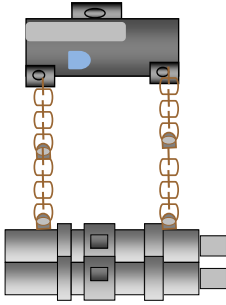
Cell contents referenced from Config\_offsets tab

# R/V Marcus G. Langseth - Gun Configuration

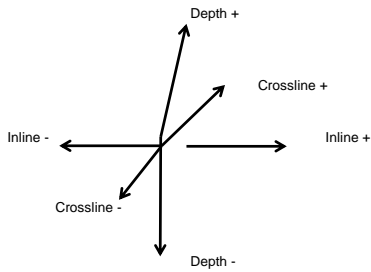


# Distances in Meters

Gun Plate



Center of ports between guns 1 and 2 is the reference point



## Hydrophone Offsets

Gun String 1				
Plate	Phone	Inline	Crossline	Depth
1		N/A	N/A	N/A
2	1	3.18	0.00	0.95
3	2	5.34	0.00	0.91
4		N/A	N/A	N/A
5		N/A	N/A	N/A
6	3	10.48	0.00	0.90
7		N/A	N/A	N/A

Gun String 2				
Plate	Phone	Inline	Crossline	Depth
1		N/A	N/A	N/A
2	1	3.05	0.00	0.93
3	2	5.48	0.00	0.96
4		N/A	N/A	N/A
5		N/A	N/A	N/A
6	3	10.50	0.00	0.92
7		N/A	N/A	N/A

Gun String 3				
Plate	Phone	Inline	Crossline	Depth
1		N/A	N/A	N/A
2	1	3.18	0.00	0.96
3	2	5.22	0.00	0.97
4		N/A	N/A	N/A
5		N/A	N/A	N/A
6	3	10.61	0.00	0.90
7		N/A	N/A	N/A

Gun String 4				
Plate	Phone	Inline	Crossline	Depth
1		N/A	N/A	N/A
2	1	3.50	0.00	0.96
3	2	5.53	0.00	0.97
4		N/A	N/A	N/A
5		N/A	N/A	N/A
6	3	10.59	0.00	0.90
7		N/A	N/A	N/A

## Depth Transducer Offsets

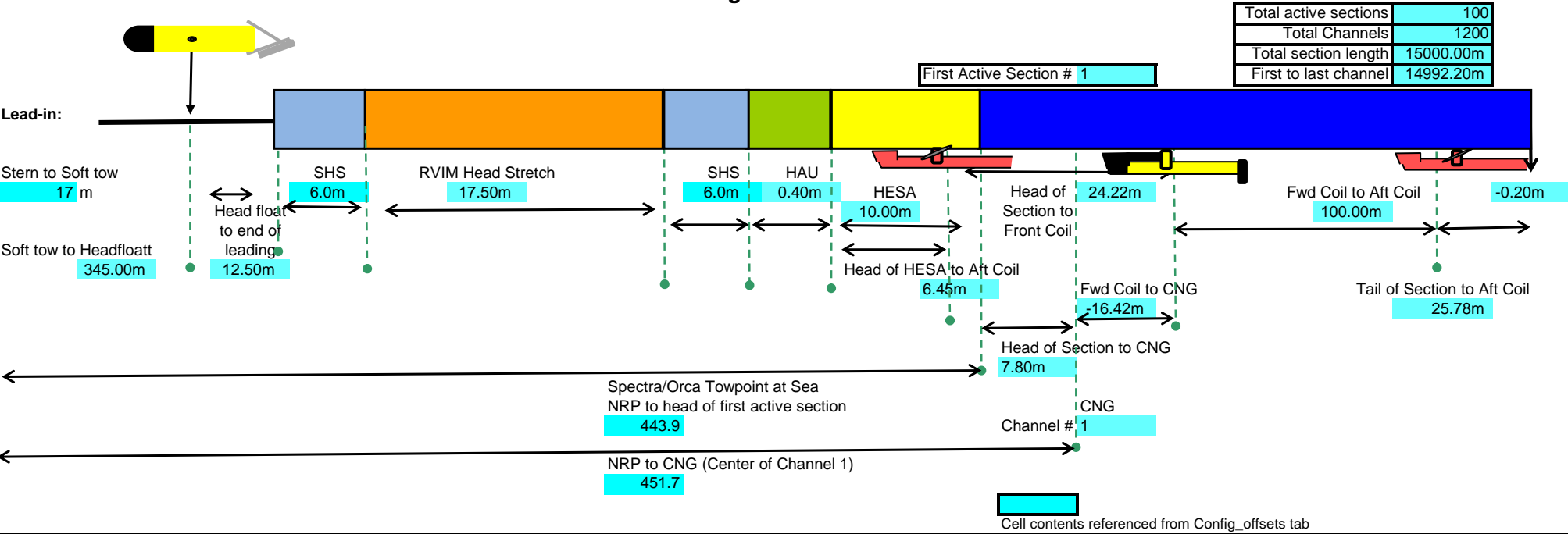
Gun String 1				
Plate	DT	Inline	Crossline	Depth
1	1	0.00	N/A	1.20
2		N/A	N/A	N/A
3	2	5.68	N/A	1.08
4		N/A	N/A	N/A
5		N/A	N/A	N/A
6		N/A	N/A	N/A
7	3	16.28	N/A	1.23

Gun String 2				
Plate	DT	Inline	Crossline	Depth
1	1	0.00	N/A	1.23
2		N/A	N/A	N/A
3		N/A	N/A	N/A
4	2	8.00	N/A	1.20
5		N/A	N/A	N/A
6		N/A	N/A	N/A
7	3	16.08	N/A	1.30

Gun String 3				
Plate	DT	Inline	Crossline	Depth
1	1	0.00	N/A	1.23
2		N/A	N/A	N/A
3	2	5.49	N/A	1.10
4		N/A	N/A	N/A
5		N/A	N/A	N/A
6		N/A	N/A	N/A
7	3	15.58	N/A	2.37

Gun String 4				
Plate	DT	Inline	Crossline	Depth
1	1	0.00	N/A	1.23
2		N/A	N/A	N/A
3	2	5.59	N/A	1.10
4		N/A	N/A	N/A
5		N/A	N/A	N/A
6		N/A	N/A	N/A
7	3	15.58	N/A	2.23

R/V Marcus G. Langseth - Streamer Front End

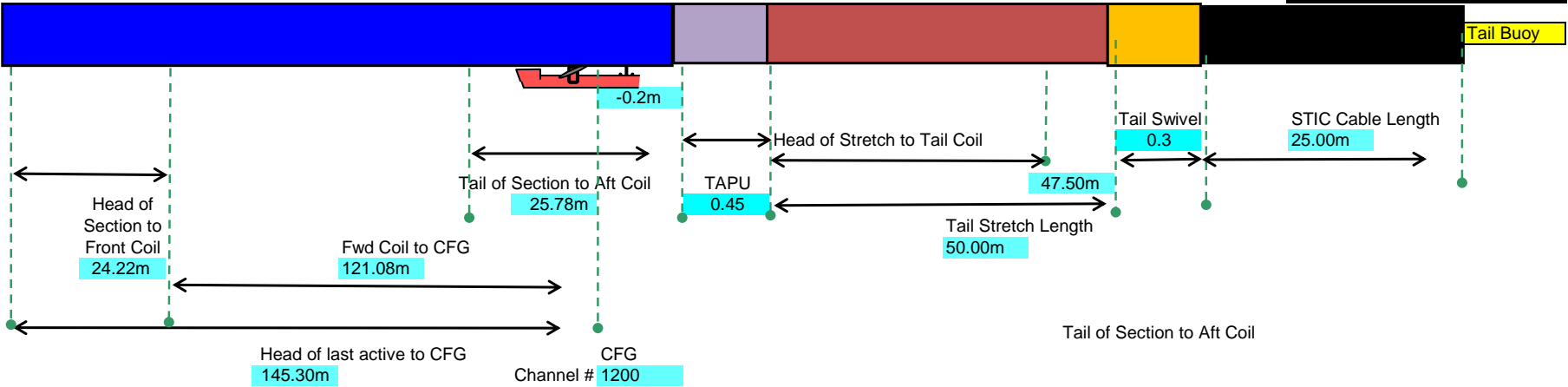




R/V Marcus G. Langseth - Streamer Tail End

Total active sections	100
Total Channels	1200
Total section length	15000.00m
First to last channel	14992.20m
CFG to TB RGPS	81.95m

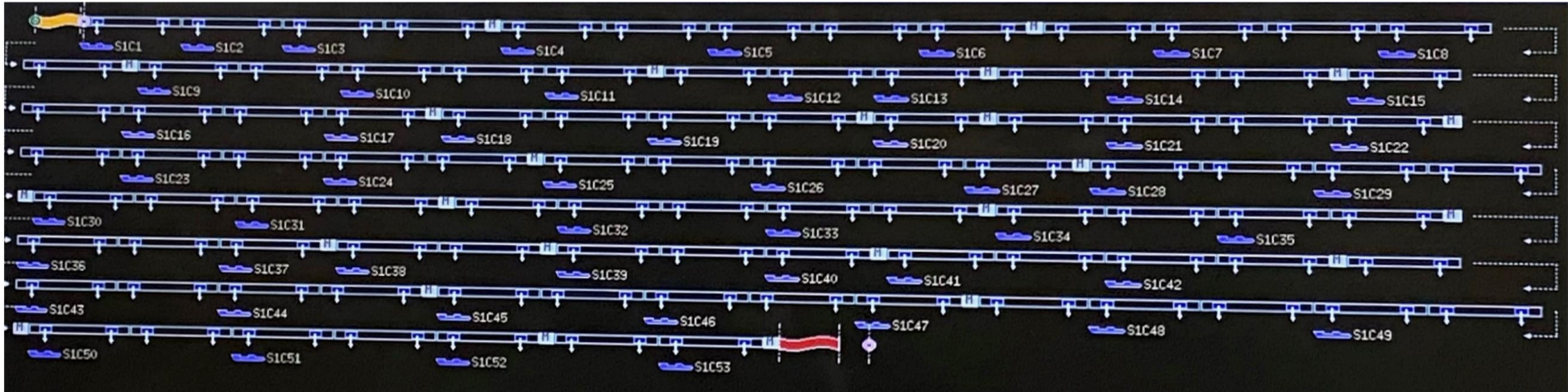
Last Active Section # 100



Cell contents referenced from Config\_offsets tab

R/V Marcus G. Langseth - Streamer Complete

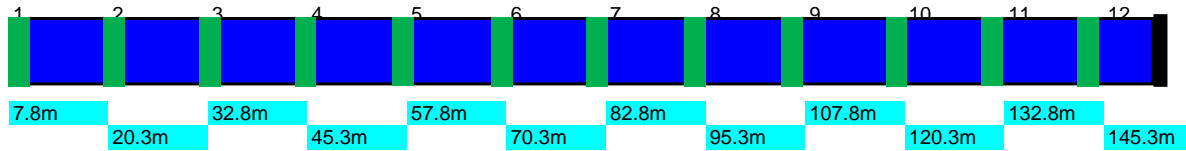
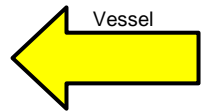
Total active sections	100
Total Channels	1200
Total section length	15000.00m
First to last channel	14992.20m



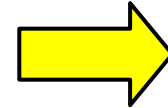
Cell contents referenced from Config\_offsets tab

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

Number of SSAS Sections 100  
Channels per active section 12  
Total channels 1200

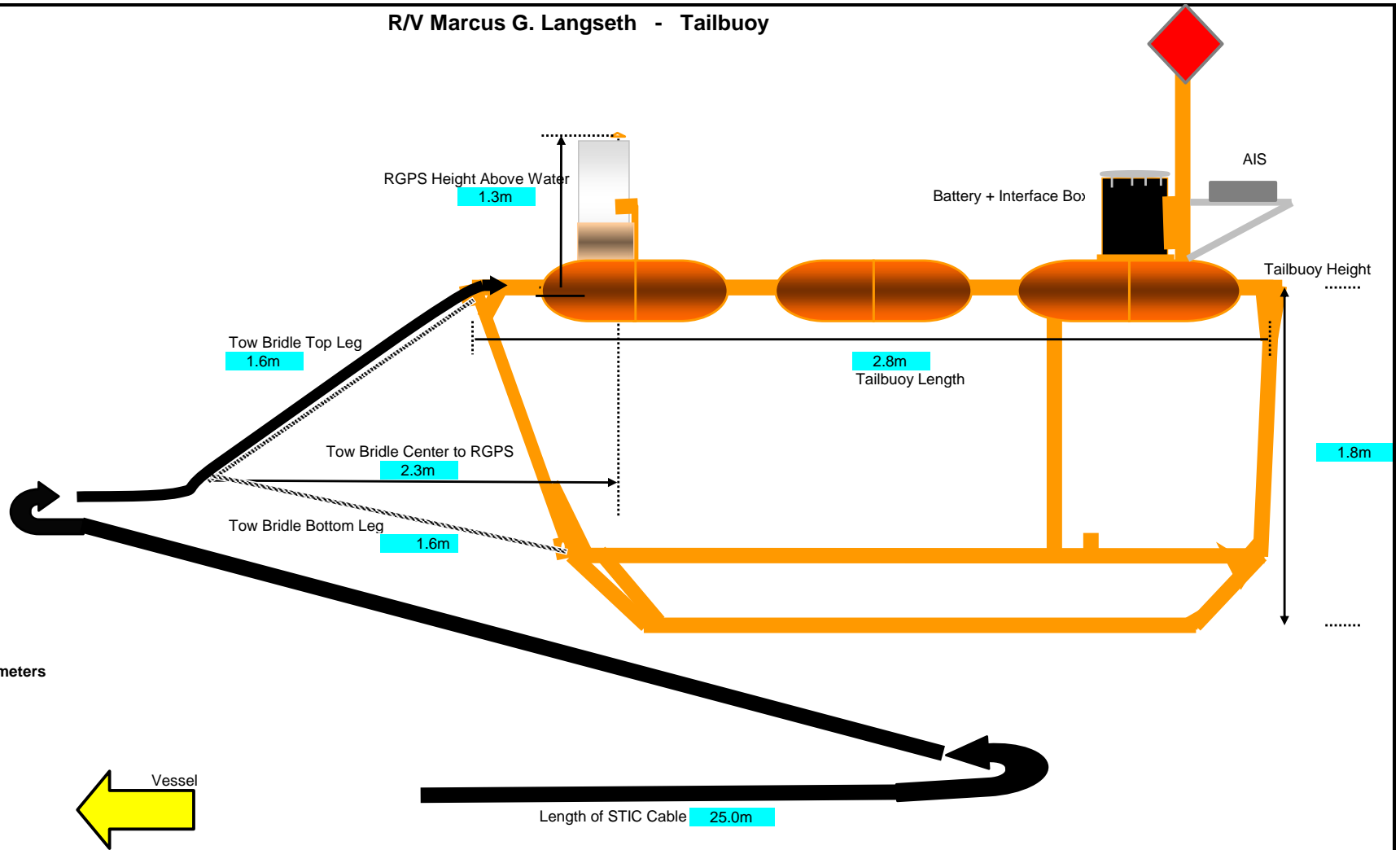


Tail buoy



Cell contents referenced from Config\_offsets tab

# R/V Marcus G. Langseth - Tailbuoy



All measurements in meters

Cell contents referenced from Config\_offsets tab

