

Company : LDEO - Lamont Doherty Earth Observatory

Vessel : Marcus G.Langseth

Client : NSF/Mountain

Project : MGL-1510 NJ3D

Area : Offshore New Jersey

Start Date : 1 June 2015

Vessel Sensor Offsets

Towing Offsets

Towing Configuration

Acoustic Offsets

Gun Array Offsets

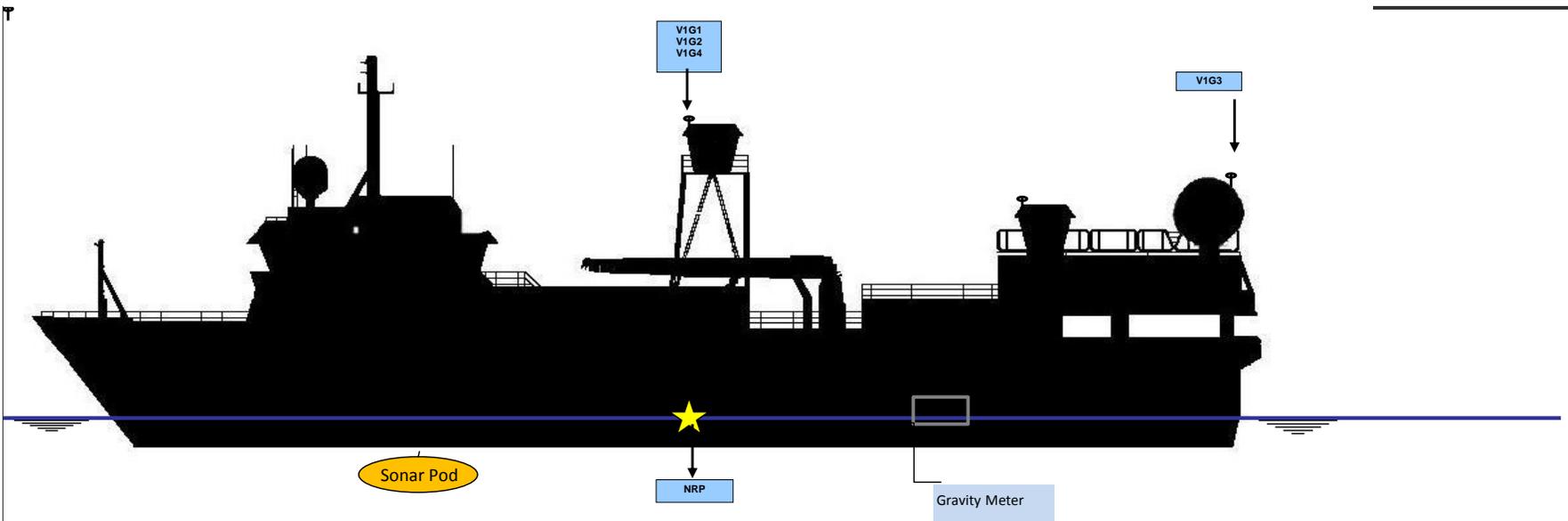
Gun Configuration

Streamer Front End

Tailbuoy Offsets

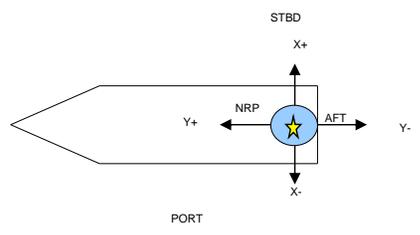
Timing





Negative values are above water
All measurements in meters

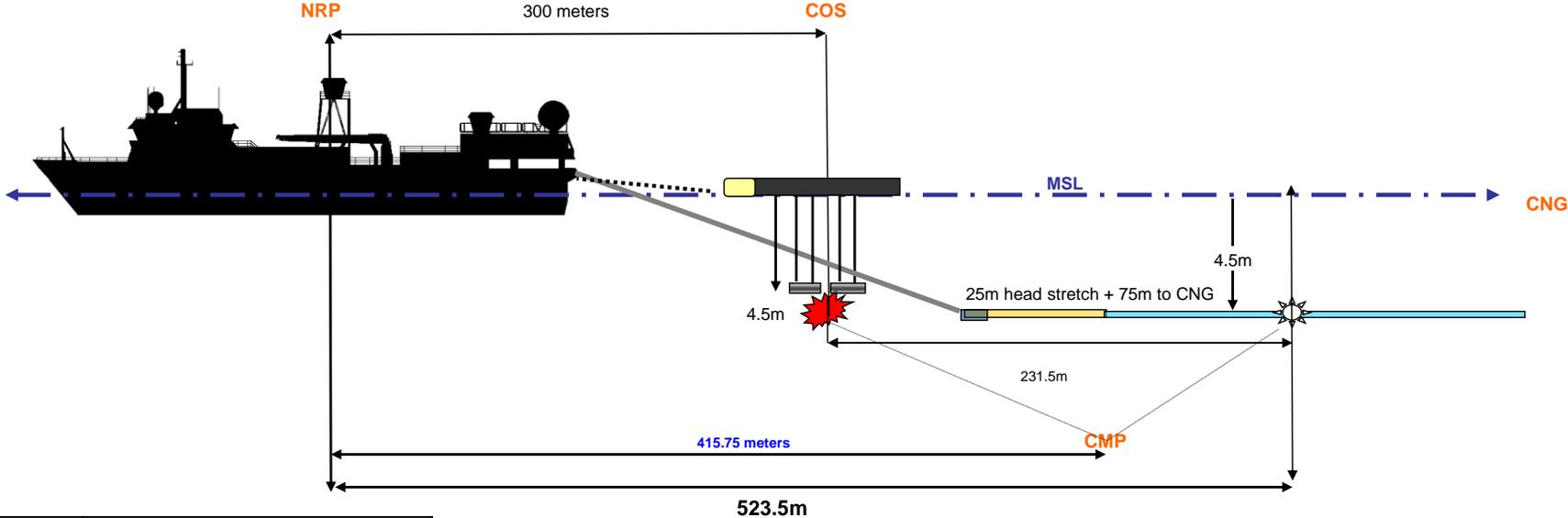
		STBD/PORT (X)	FORE/AFT (Y)	UP/DOWN (Z)	
★	NRP	NAVIGATION REFERENCE POINT	0.00	0.00	0.00
	V1G1	C-Nav 3050	0.00	0.00	-16.90
	V1G2	SeaPath 200	0.00	1.50	-16.90
	V1G3	C-Nav 2000	-2.10	-29.20	-14.50
	V1G4	Pos MV	-1.30	1.20	-16.90
	V1R1	PosNet	-1.30	0.00	-16.90
	Sonar Pod	EM122 Knudsen ADCP	0.00	20.20	7.49
	MRU	Seapath MRU	2.30	-14.16	-4.30
	BGM	Bell Gravity Meter	0.00	-13.10	-3.49



Note: All Echosounders are used in Spectra with 6.6m ship's draft correction applied.

R/V Marcus G. Langseth - Towing Offsets

*** Offsets used for sequences ***



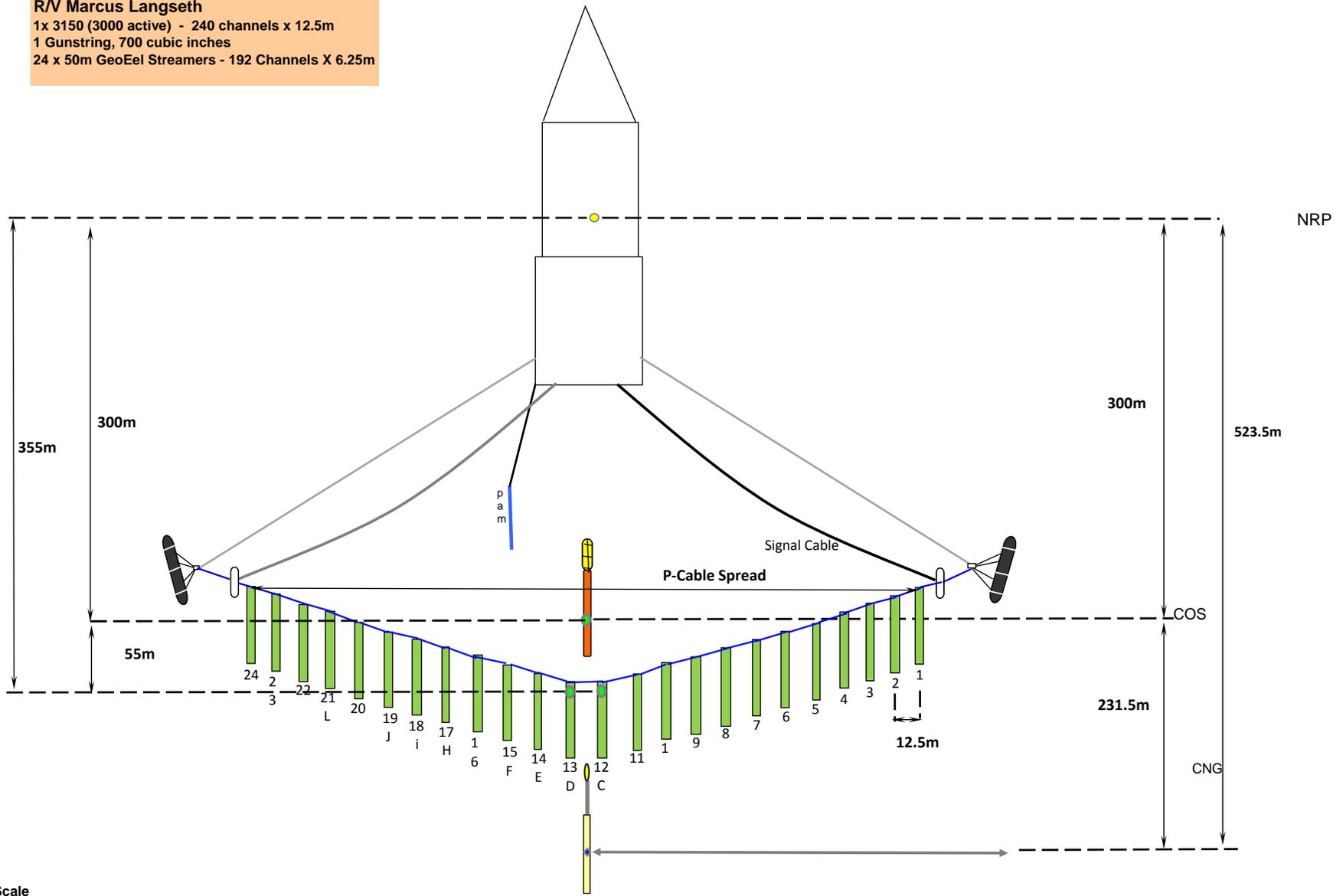
NRP	Nav Reference Point
COS	Centre of Source
CNG	Centre of Near Group (Trace # 001 of:S1)
CMP	Common Mid-Point
MSL	Mean Sea Level
NRP-Stern	29.5m
NRP-COS	300

Seq001-xxx Nominal streamer depth was



All measurements in meters

R/V Marcus Langseth
 1x 3150 (3000 active) - 240 channels x 12.5m
 1 Gunstring, 700 cubic inches
 24 x 50m GeoEel Streamers - 192 Channels X 6.25m



NOT to Scale

R/V Marcus G. Langseth - Acoustic Offsets

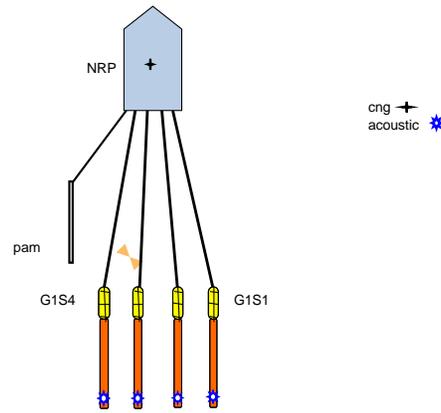
Digicourse

- Digicourse CTX Transceiver 4029
- Digicourse Streamer CMX Acoustic Transceiver
- T5 is located on the tailbuoy referenced to the rgps
- All ranges are 2-Way



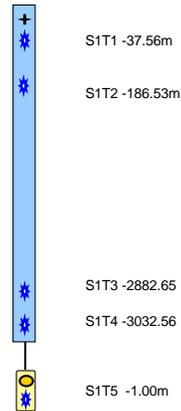
All measurements in meters

cng -> S1T1 = -37.5m
 cng -> S1T2 = -187.5m
 G1S1 -> G1T1: x = 0.0 y = -8.0m z = -11.875m
 G1S2 -> G1T2: x = 0.0 y = -8.0m z = -11.875m
 G1S3 -> G1T3: x = 0.0 y = -8.0m z = -11.875m
 G1S4 -> G1T4: x = 0.0 y = -8.0m z = -11.875m

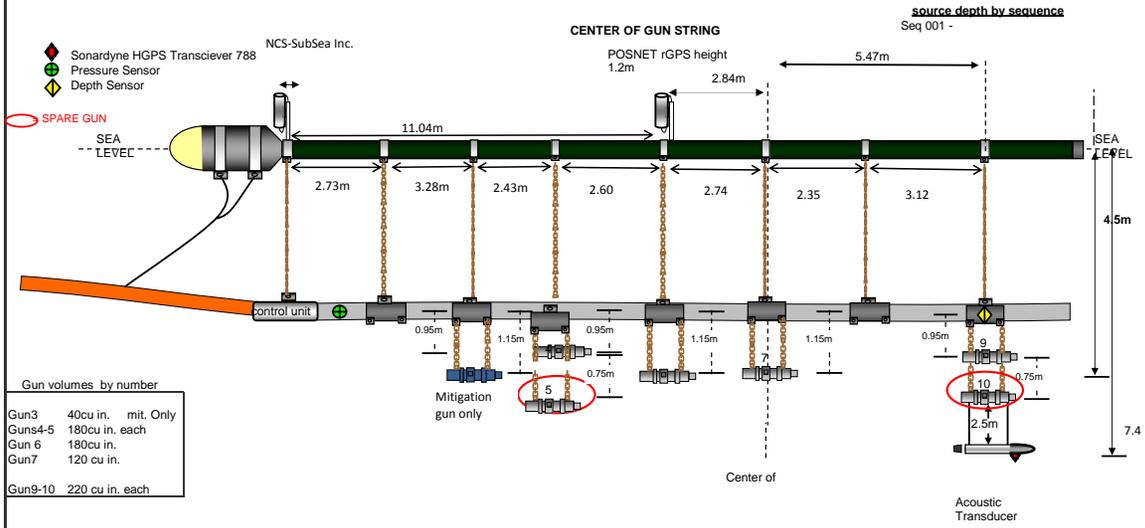


 Cable acoustic offsets are referenced to cng on individual streamer

Tailbuoy acoustics referenced to RGPS pod



R/V Marcus G. Langseth - Gun Array Offsets



Gun volumes by number

Gun3	40cu in. mit. Only
Guns4-5	180cu in. each
Gun 6	180cu in.
Gun7	120 cu in.
Gun9-10	220 cu in. each

Array total volume (without spares) is 6600 cubic inches. Total volume per string (without spare) 700 cubic inches.
 String 1 has guns 9 & 10 in a horizontal cluster; Strings 2, 3, 4, have all clusters hanging vertically. **Cluster Guns are 1m apart.** **NOTE: drawing not to scale**
 Gun clusters have 0.75m between guns and hang 0.95m from center of hanger. 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

r/v Marcus G. Langseth - Gun Configuration

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

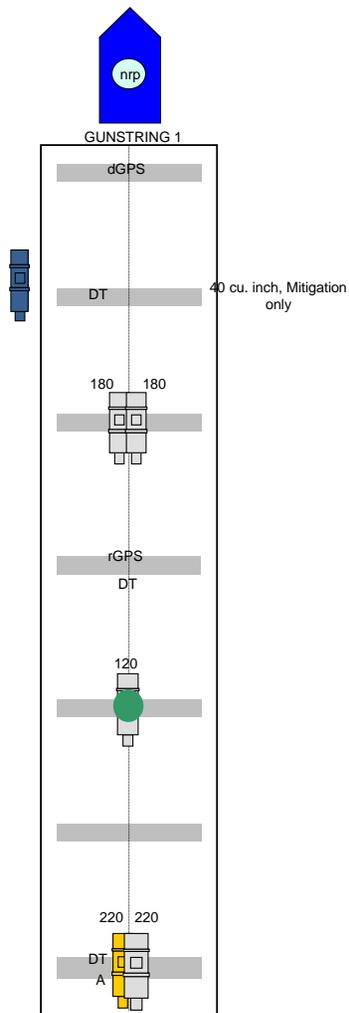
Center of Source

Spare Gun

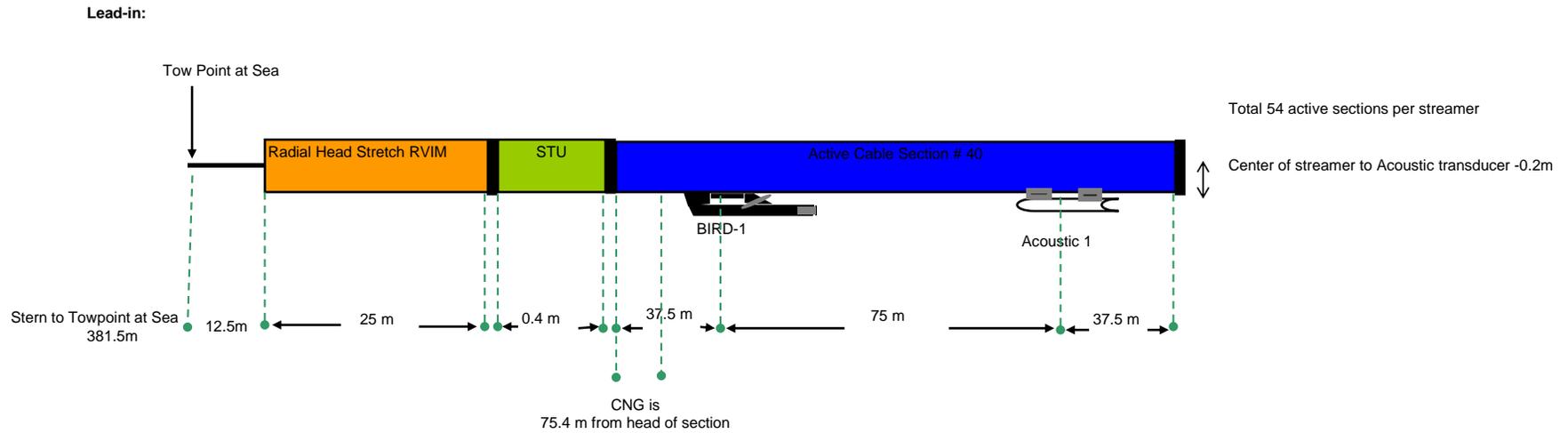
Gun Clusters

Guns 1 & 2 horizontal array
 Guns 4 & 5 vertical array
 Guns 9 & 10 vertical array

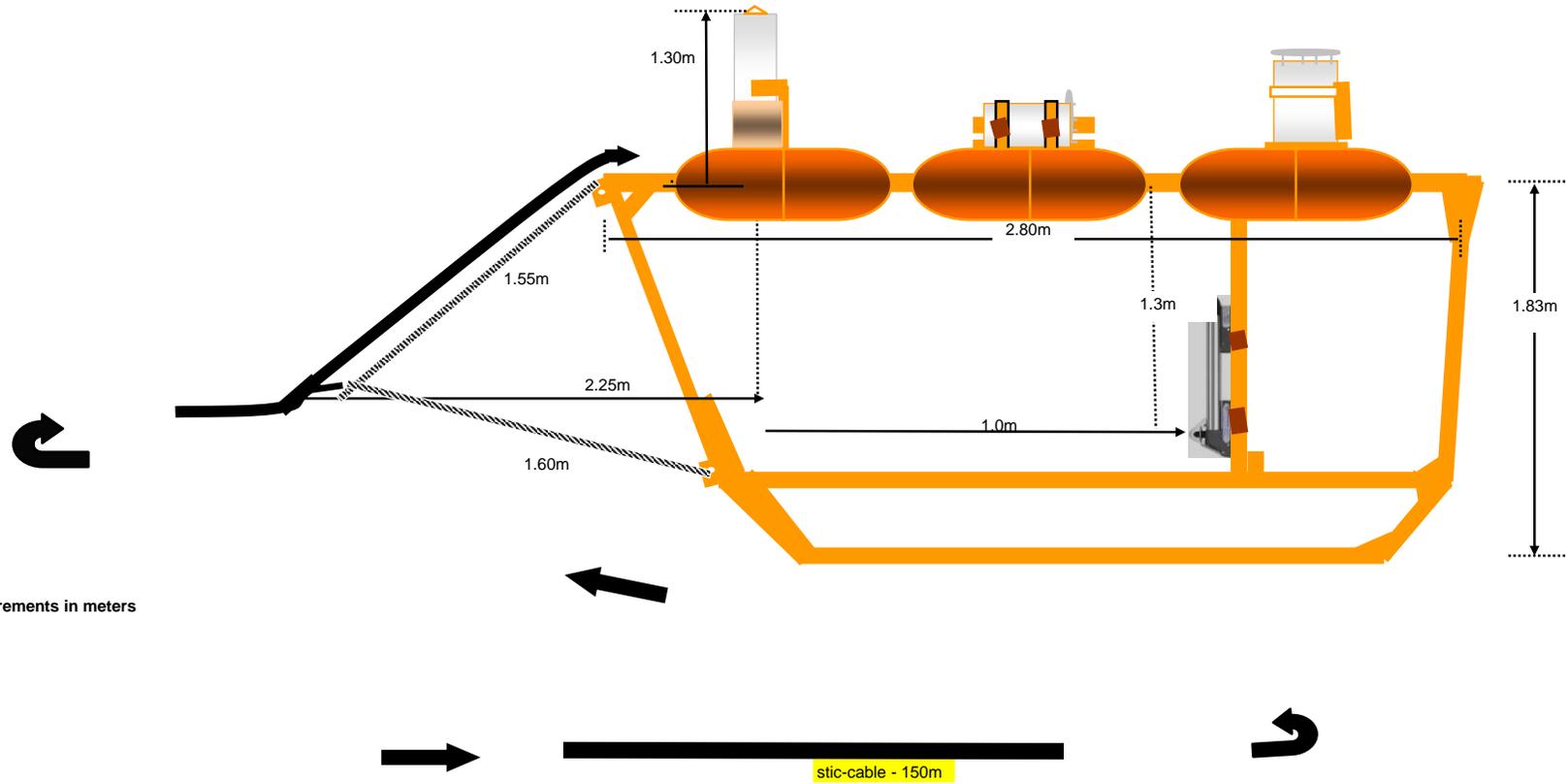
All measurements in meters



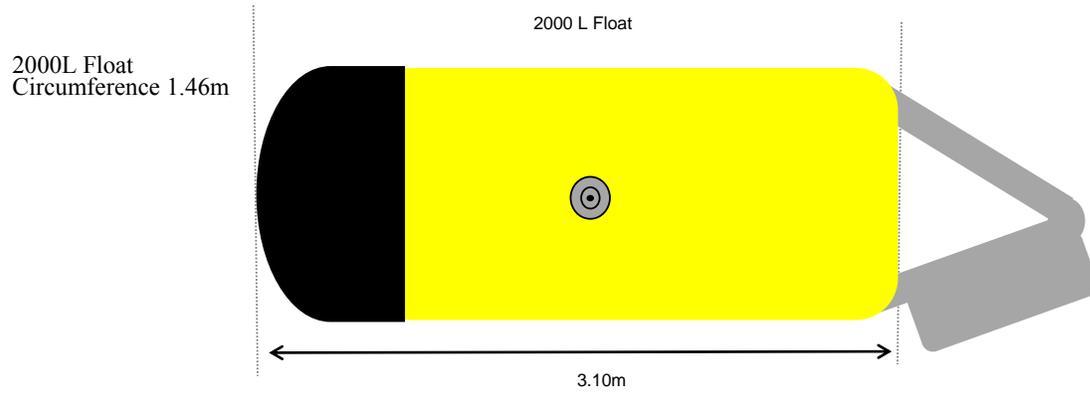
R/V Marcus G. Langseth - Streamer Front End



R/V Marcus G. Langseth - Tailbouy



R/V Marcus G. Langseth - cable head float



All measurements in meters