

Company : LDEO
Vessel : Marcus G.Langseth
Client : NSF

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

Project : MGL1110
Area : Alaskan Megathrust - Shillington
Start Date : 28 June 2011

Vessel Sensor Offsets

Towing Offsets

Acoustic Offsets

Gun Array Offsets

Gun Configuration

Streamer Front End

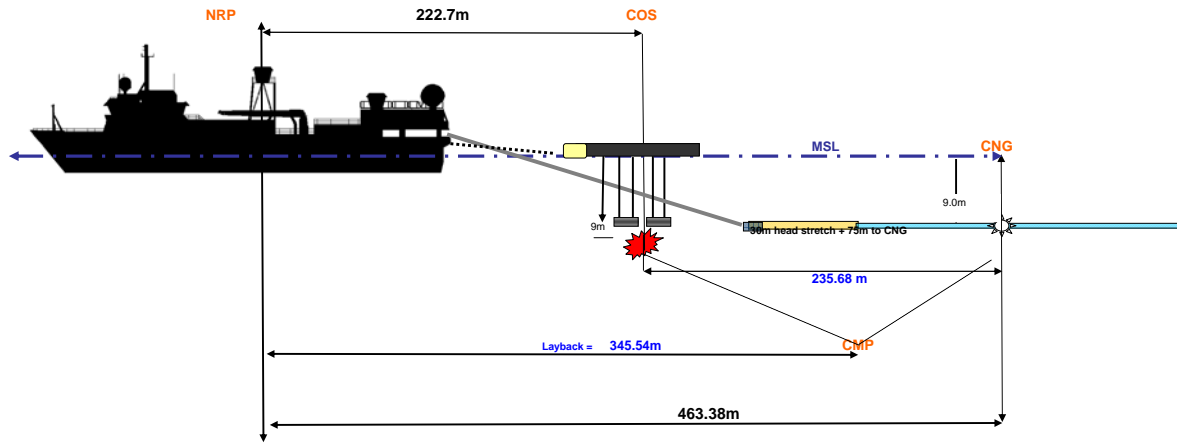
Tailbuoy Offsets

Timing Langseth

Timing Spectra



R/V Marcus G. Langseth - Towing Offsets



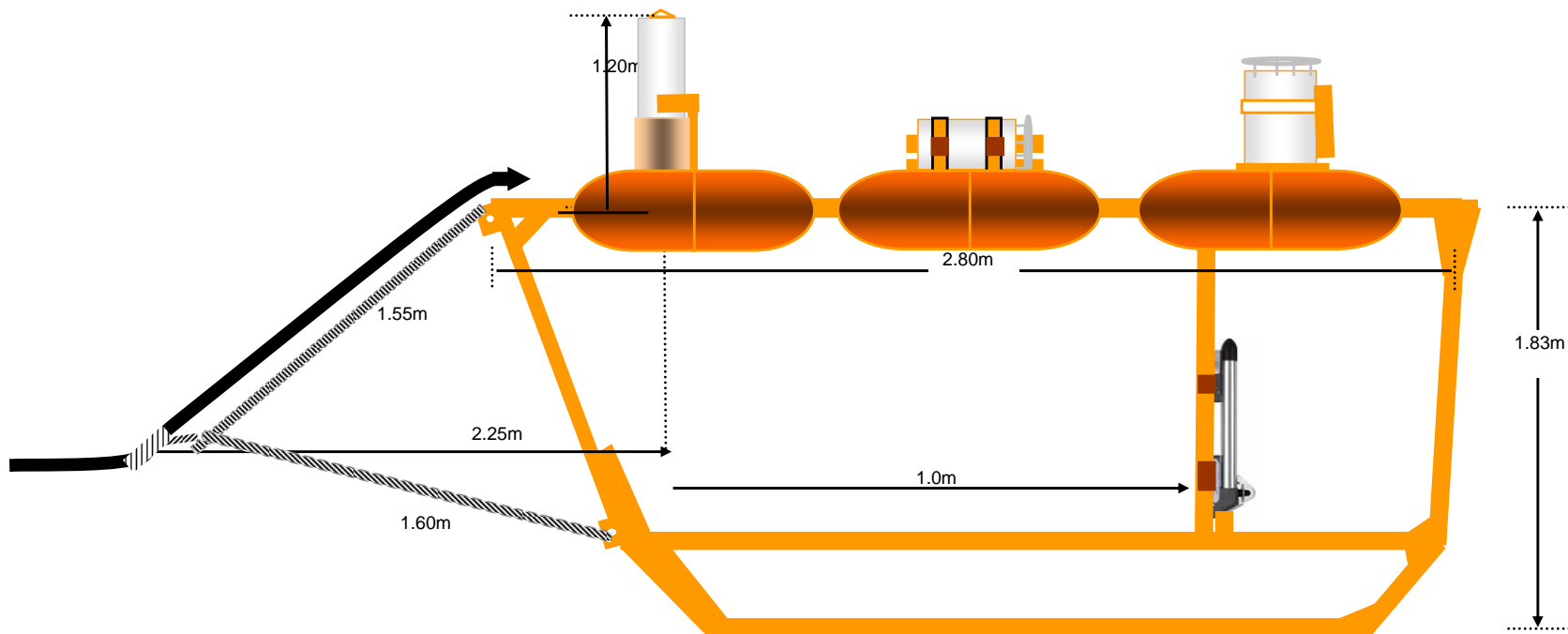
*** Offsets used for acquisition ***

NRP-Stem	29.50	m
NRP-COS	222.70	m
NRP-CNG	463.38	m
COS-CNG	235.68	m
NRP-CMP	345.54	m

NRP	Nav Reference Point
COS	Centre of Source
CNG	Centre of Near Group (Trace # 636)
CMP	Common Mid-Point
MSL	Mean Sea Level

All measurements in meters

R/V Marcus G. Langseth - Tailbouy



All measurements in meters



stic-cable - 75m



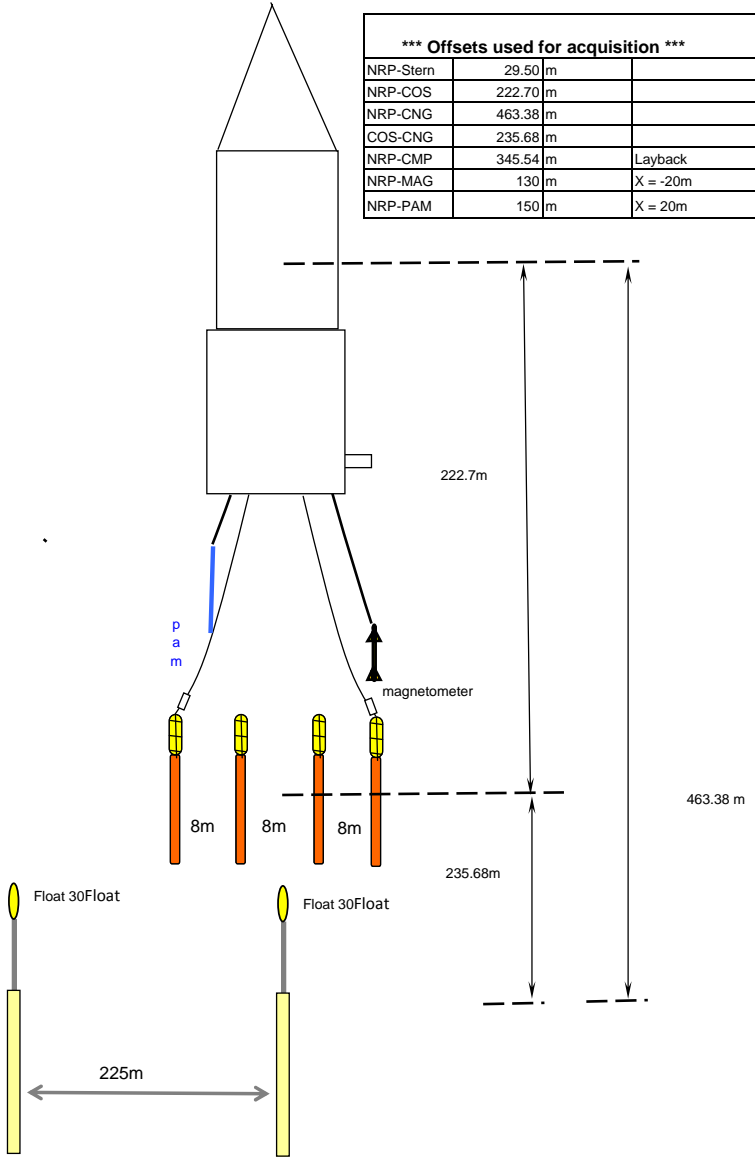
R/V Marcus G. Langseth "tow" configuration

*** Offsets used for acquisition ***		
NRP-Stern	29.50 m	
NRP-COS	222.70 m	
NRP-CNG	463.38 m	
COS-CNG	235.68 m	
NRP-CMP	345.54 m	Layback
NRP-MAG	130 m	X = -20m
NRP-PAM	150 m	X = 20m

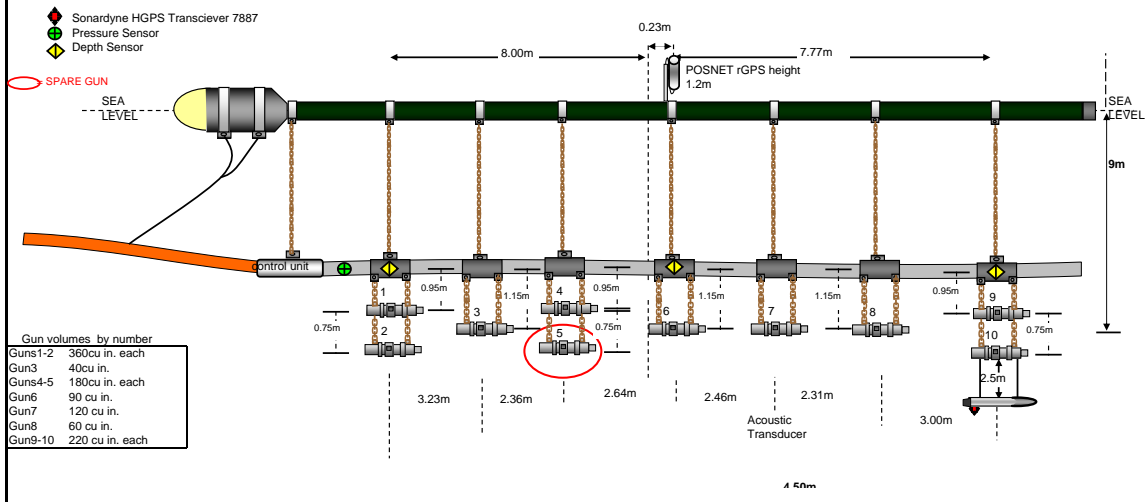
NRP	Nav Reference Point
COS	Centre of Source
CNG	Centre of Near Group (Trace # 468)
CMP	Common Mid-Point
MSL	Mean Sea Level

R/V Marcus Langseth
2 x 8000
4 Gunstrings

NOT to Scale



R/V Marcus G. Langseth - Gun Array Offsets

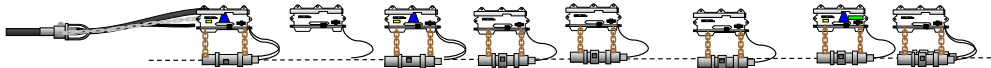


Array total volume (without spares) is 6600 cubic inches.
 String 1 has guns 9 & 10 in a horizontal cluster; Strings 2, 3, 4, have all clusters hanging vertically.
 Gun clusters have 0.75m between guns and hang 0.95m from center of hanger

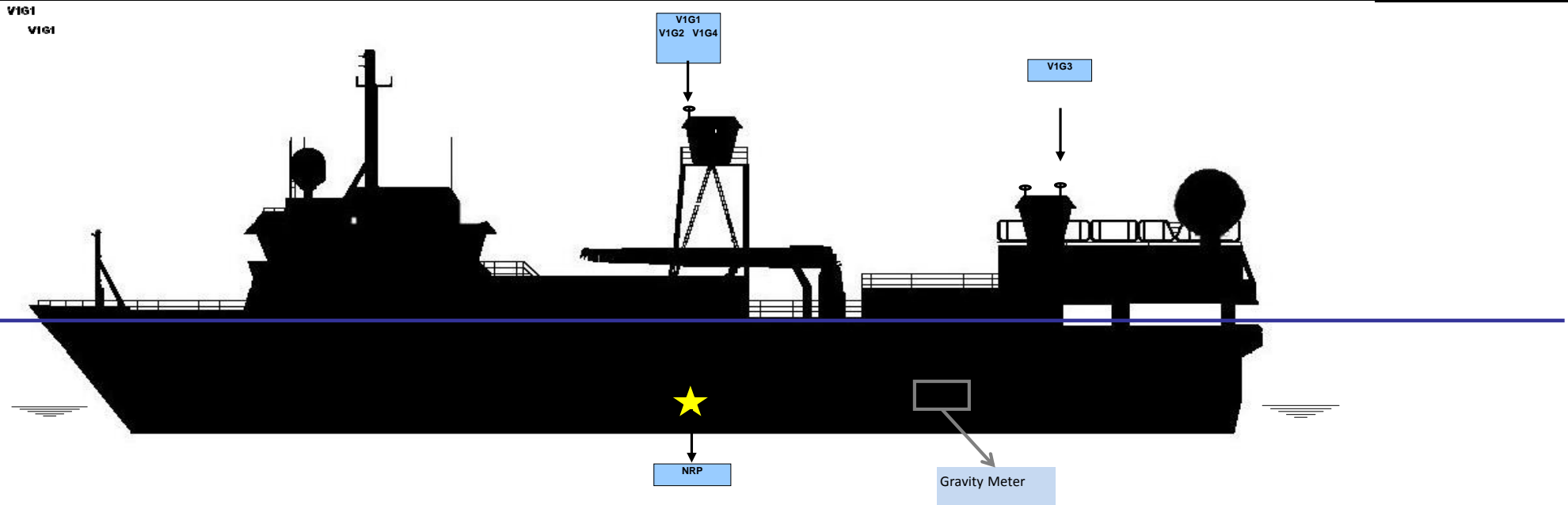
Total volume per string (without spare) 1650 cubic inches.
Cluster Guns are 1m apart. **NOTE: drawing not to scale**
 Single guns hang from hanger 1.15m

All measurements in meters

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



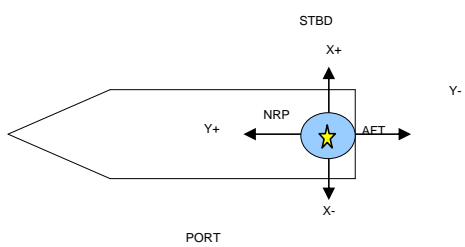
V1G1
V1G1



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	4.87	-15.27	-14.50
	V1G4	Pos MV	-1.30	1.20	-16.90
	V1R1	PosNet	-1.30	0.00	-16.90
	EM122	Multibeam Transducer Array	0.00	20.20	7.49
	MRU	Seapath MRU	2.30	-14.16	-4.30
□	BGM	Bell Gravity Meter	4.40	-13.10	-3.49

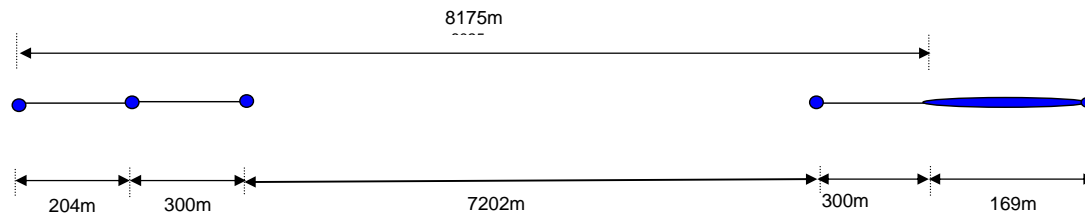


Note: All Echosounders are used in Spectra with 6.6m ship's draft correction applied.

R/V Marcus G. Langseth - Acoustic Offsets

Sonardyne SIPS 1

- HGPS Transceiver 7887 & Shock Mounted Transducer 7660
- XSRS 8005 Acoustic Transceiver (Longlife Battery)



All measurements in meters

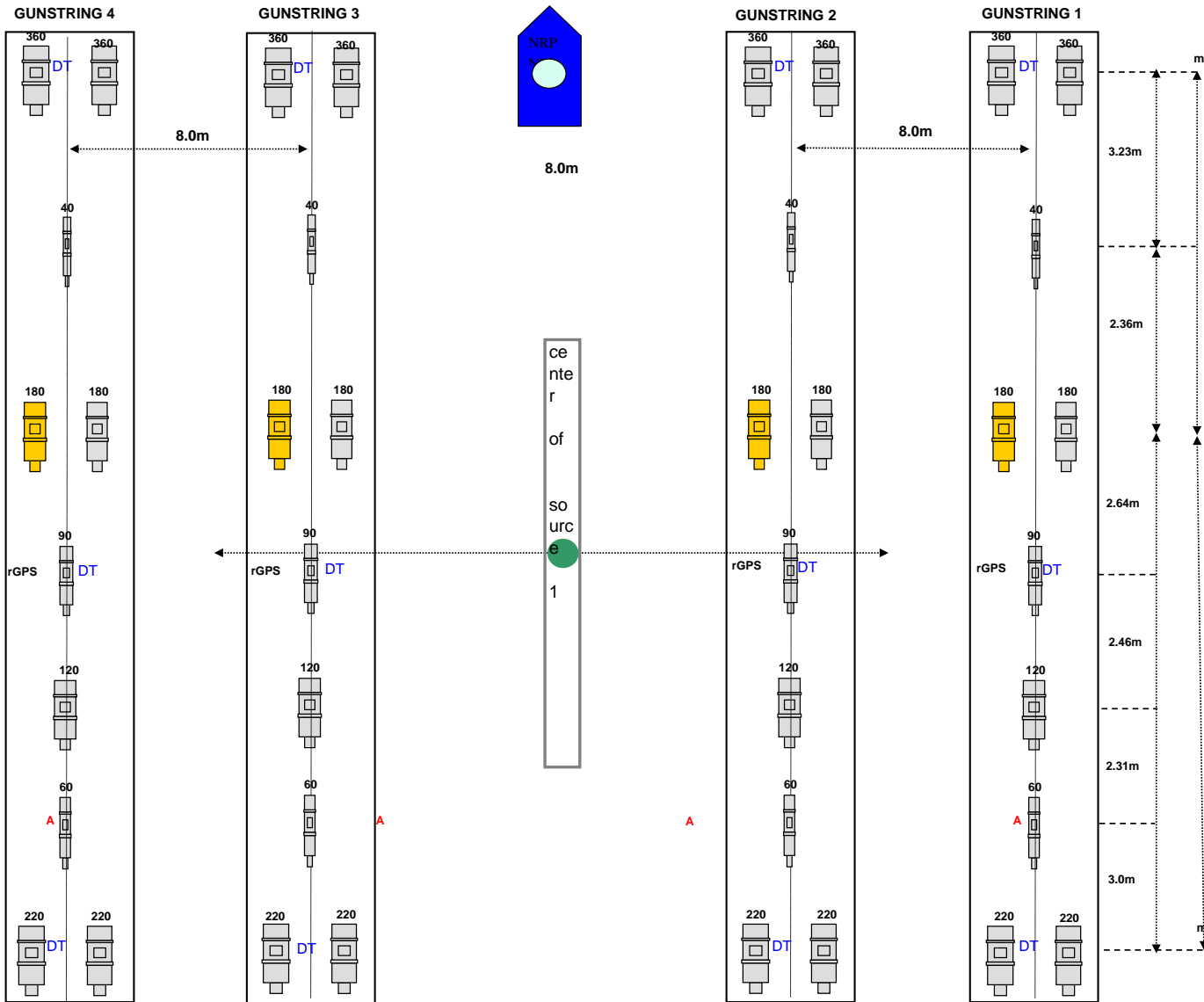
r/v Marcus G. Langseth - Gun Configuration

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

Spare Gun

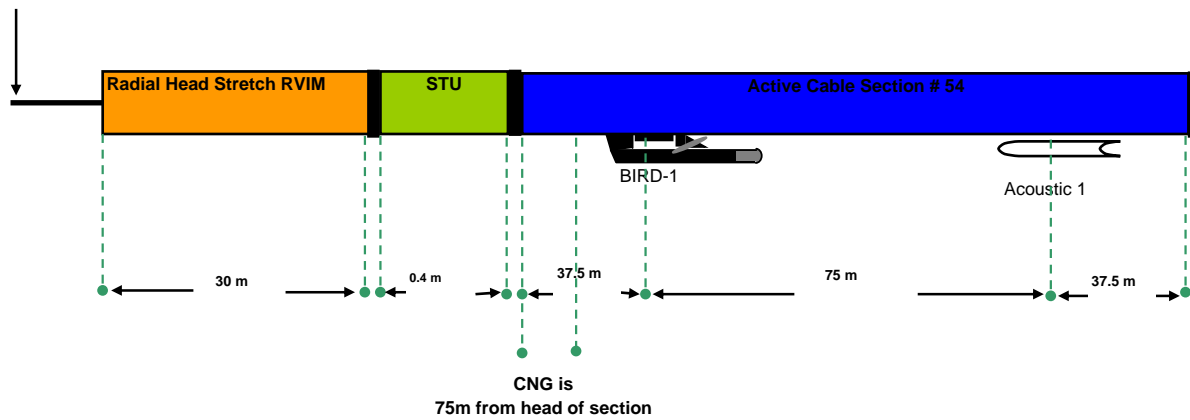
Cluster Guns are mounted 1m apart
 String 1 cluster 9 & 10 mounted horizontally
 String 2, 3, & 4 all clusters mounted vertically.

All measurements in meters

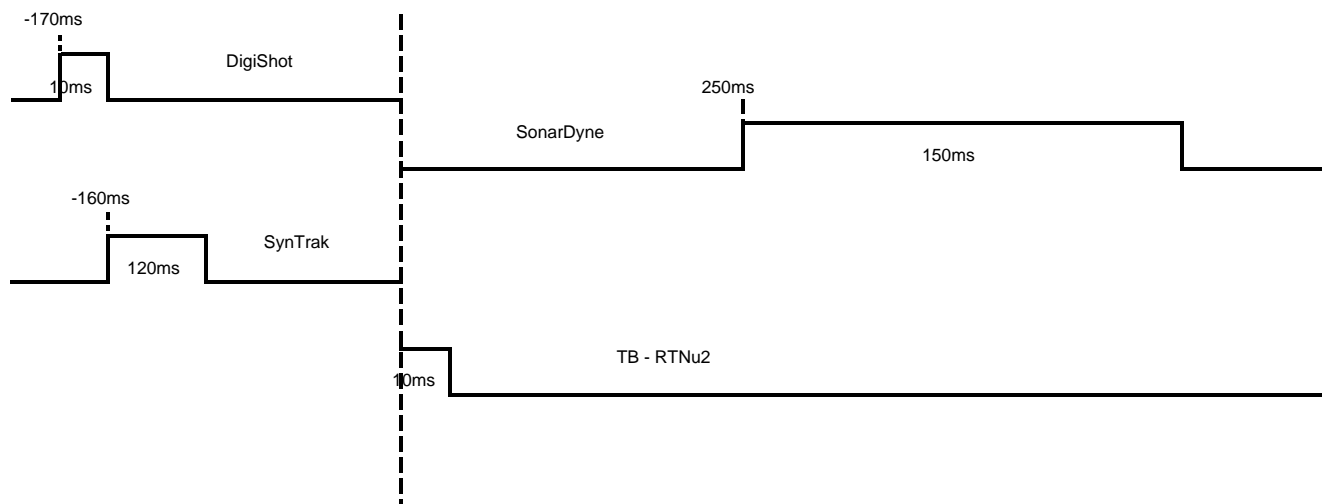


R/V Marcus G. Langseth - Streamer Front End

Lead-in:
Outer = 505m
Inner = 465m



TO Shot Predict



Spectra timing for r/v Marcus G. Langseth

