Vessel Sensor Offsets
Towing Offsets
Acoustic Offsets
Gun Array Offsets
Gun Configuration
Streamer Front End
Tailbuoy Offsets
Timing Langseth
Timing Spectra
All measurements in meters
R/V Marcus G. Langseth “tow” configuration

R/V Marcus Langseth
1 x 8000
4 Gunstrings

NOT to Scale

*** Offsets used for acquisition ***

| NRP/Stern | 29.50 m |
| NRP-COS  | 223.10 m |
| NRP-CNG  | 399.10 m |
| COS-CNG  | 176.00 m |
| NRP-CMP  | 315.1 m  |
| NRP-MAG  | 130 m    |
| NRP-PAM  | 150 m    |

NRP = Nav Reference Point
COS = Centre of Source
CNG = Centre of Near Group (Trace # 458)
CMP = Common Mid-Point
MSL = Mean Sea Level
Sonardyne HGPS Transceiver 1906T
Pressure Sensor
Depth Sensor

Guns 1-2
Gun 3 40 cu in.
Guns 4-5 180 cu in. each
Gun 6 90 cu in.
Gun 7 120 cu in.
Gun 8 60 cu in.
Gun 9-10 220 cu in. each

Array total volume (without spares) is 6600 cubic inches. Total volume per string (without spare) 1650 cubic inches.

String 1 has guns 9 & 10 in a horizontal cluster; Strings 2, 3, 4, have all clusters hanging vertically.

NOTE: drawing not to scale

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

All measurements in meters
DT = Depth Transducer
A = Acoustic
P = 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
Lead-in:
Outer = 505m
Inner = 465m

R/V Marcus G. Langseth - Streamer Front End

Radial Head Stretch RVIM
STU
Active Cable Section # 40

BIRD-1
Acoustic 1

30 m  9.4 m  37.5 m  75 m  37.5 m

CNG is
75m from head of section
TO Shot Predict

-170ms
0ms
DigiShot

-160ms
120ms
SynTrak

250ms
SonarDyne

150ms
TB - RTNu2
Spectra timing for r/v Marcus G. Langseth