R/V Marcus G. Langseth - Towing Offsets

*** Offsets used for sequences ***

| NRP-Stern | 165.00 m |
| NRP-COS  | 165.00 m |
| COS-CNG  | na |
| NRP-CMP  | na |

All measurements in meters
Sonardyne HGPS Transceiver TSS7
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.

All gun volumes, numbering, locations, and offsets approved by chief gunner Tom Spoto.
**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
Spectra timing for r/v Marcus G. Langseth