

RV SIKULIAQ Multichannel Seismic System Geometry – SKQ2418S (Mark)

There are three towing configurations for this survey, referred to here as A, B, C. Offsets for each point, streamer tow point (Streamer TP), gun tow point (Gun TP), center of source (COS), and first record group (FRG), are referenced to survey points, numbers 301 and 302 from the ship's survey document, pages 60-61. The reference plane, a granite block, is the zero referenced point for the primary GPS, Seapath 380. Please note that the granite block is not centerline, hence unequal lateral offsets (x, navipac convention, and y, ship survey).

The primary tow points for PORT and STBD are on two 20 foot slings routed through the aft outboard chocks to bits, and the centerline (CENT) tow point is from the aftmost center deck socket, see the survey document. While towing four guns, shorter slings were used to account for the aftwards position of the port chock relative to the starboard chock, effectively keeping the fore-aft position of the gun hangers equal (y-values in Navipac convention). The distance from the Gun TP and COS is 26.5 m.

Due to a malfunctioning deck unit, there are two configurations for depth control birds (e.g. CB01). The first is a bird at the head of the forward vibration isolation section, and another at the head of the aft vibration isolation section after section #15. These two birds were set to maintain maximum fin angle of -15 degrees. This diving attitude is balanced by the forward tow point and the tail buoy and we estimate the streamer depth is around 2m below the surface. The second configuration involves five birds set to maintain a depth of 3m. In this configuration the birds could not be monitored in real time. These birds were located at the head of the forward vibration isolation section, head of second, sixth, and tenth active sections, and the head of the aft vibration isolation section.

Coordinate conventions:

NaviPac Axes: +X STBD, +Y FWD, +Z UP

Survey Axes: +X FWD, +Y STBD, +Z DOWN

Towing Configurations

A- Streamer STBD, Gun CENT, Mag PORT

B- Streamer STBD, Gun PORT, no Mag

C- Streamer CENT, Four Guns, no Mag

Offsets

(x, y, z) meters (NaviPac convention) relative to the zero referenced Seapath (0,0,0) at the reference plane (granite block).

(meters)	A	B	C
First Record Group	9.61, -183.9, -3	9.61, -183.9, -3	2.12, -180.48, -3
Center of Source	2.12, -53.85, -4	-5.39, -57.33, -4	2.12, -57.33, -4
Streamer Tow Point	9.61, -30.83, -1	9.61, -30.83, -1	2.12, -27.35, 2.3
Gun Tow Point	2.12, -27.35, 2.3	-5.39, -30.83, -2	9.61, -30.83, -1
Gun Tow Point (PORT)			-5.39, -30.83, -1

Referenced Survey Benchmarks (SURVEY AXES convention)

reproduced from ship survey document

pg #, benchmark #, x, y, z

60, 301, -24.0293, 8.6507, -2.3673

61, 302, -24.0293, -4.4249, -2.3568

Streamer Configuration

25m - Streamer TP to faired tow cable

75m - two faired tow cable (one 75m, one 63m)

25m - vibration isolation

50m - Active Section (15 sections = 120 ch, 13 sections = 104 ch)

25m - vibration isolation

50m - tail buoy tow cable



RV SIKULIAQ Streamer Geometry

SKQ2418S (Mark) Jurassic Quiet Zone

Dec 13 - Jan 8 2025

