Operations: Seismic reflection profiles were acquired for BAR4, in conjunction with area BAR9 (Lower Sitka Sound) on departure from the Sitka region. A 750m streamer was deployed, and two 45/45 cu in. GI guns were used, with a five minute ramp-up period between guns following 30 minutes of observation by trained marine mammal observers. The near offset determined from the direct arrival is –55 m accomplished with a single passive section towed from the bridal. Operations were started heading north and called Line GOA1101. Numerous problems occurred with getting the system to fire and record data that stemmed primarily from not having built the streamer correctly in the Syntron system. Once the streamer was built correctly can 24 would not initialize which required the seismic crew to break the streamer at the passive section and tie it directly into the ship. After circling during these operations and getting the streamer to successfully build and record data the line heading south through BAR-4 and BAR-9 was started as GOA1102 (GOA1101 had no usable data). GOA1102 ran successfully for 234 shots when the gun computer crashed. During the time it took to bring it back up and resume shooting the Ewing circled back around to come back online with sufficient overlap to avoid a gap in the coverage. The line was restarted at the point as GOA1103. GOA1103 had several turns within it during which (and for several shots after each) the aft portions of the streamer were extremely noisy. Upon recovery at the end of the otherwise successful line it turned out a Halibut fishing buoy was tangled around the streamer's tail buoy which likely was generating the noise.

Operations: Two seismic reflection profiles, GOA0701 and GOA0702, were shot over Sitka Slope (site BAR5). A 1500m streamer was deployed, and two 45/45 cu in. GI guns were used, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset for this survey was –186 m based on the direct arrival and was accomplished with a stretch section and 2 passive streamer sections towed from the bridal on deck. The weather conditions were poor for both lines resulting in noisy shot gathers. Additionally, only the first shot was record for GOA0701 and then the next 76 shots had no navigation. A restart of syntron fixed this problem and the remaining shots of GOA0701 was recorded successfully. Due to the noise in the water column we tried deepening the streamer from SP150-186 from 3-4 m but no improvement on noise and so the streamer was put back at 3 m for the rest of the survey. The same navigation error occurred after the first shot on GOA0702 resulting in first 60 shots lost and fixed after restarting Syntron. After these lines the hypothesis was that by trying to use an FFID in Syntron more than 1 causes these navigation glitches. Subsequent lines all used FFID's of 1 and this problem did not reoccur. At the end of line the decision was made to shorten the near offset on the next 1.5 km streamer shoot. The recovery was in rough weather and difficult but all gear was brought on successfully with no mishaps.

Operations: A seismic reflection profile, GOA1401, was shot in Lisianski Inlet, site JUN2, from the head of the fjord to the mouth. A 750m streamer was deployed, and two 45/45 cu in. GI guns were used, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset determined from the direct arrival is –55 m accomplished with a single passive

section towed from the bridal. Operationally this line was acquired flawlessly in perfect weather conditions.

Operations: One seismic reflection profile, GOA1501, was shot in Lynn Canal, sites JUN3 and JUN4, from the head of the fjord to the open waters at the intersection of Icy Strait. A second profile, GOA1502, was shot as a crossline through site JUN3 from west to east within the intersection of Icy Strait and Lynn Canal. A 750m streamer was deployed, and two 45/45 cu in. GI guns were used, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset determined from the direct arrival is –55 m accomplished with a single passive section towed from the bridal. During setup of the line the gun computer crashed but was brought up prior to SOL. Streamer rode heavy during much of the upper and middle Lynn Canal likely due to fresh water (20 ppt at head of the canal and 30 ppt at the intersection with Icy Strait). Once the intersection with Icy Strait was reach the streamer balanced itself. Data not greatly affected.

Operations: A seismic reflection profile, GOA1901, was shot in Muir Inlet, sites GOA14 and GOA13, from the head of the fjord to the mouth. A 750m streamer was deployed, and two 45/45 cu in. GI guns were used, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset determined from the direct arrival is –55 m accomplished with a single passive section towed from the bridal. The acquisition was without troubles and the data looks excellent.

Operations: Three seismic reflection profiles, GOA1301, GOA1302, and GOA1303, were shot outside of Cross Sound (site GOA12). A 1500 m streamer was deployed, and two 45/45 cu in. GI guns were shot every 25 m, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset should have been –111 m due to a stretch section and a single passive section towed from the bridal. GOA1301 was shot with the first 6 channels containing no data, a d-wave that looked to project to less than 0 ms, and the bad channel #48 lying farther towards the tail. Turned out the wrong number of cans were entered into Syntron causing it to declare the aft 2 cans passive thus not recording with the last 12 channels and instead recording with the “passive” section and attempting to record with the stretch section! At 12:00 a power problem caused the ship to loose propulsion which was regained by 12:10. The guns tangled around streamer during slow down and thus had to be turned off and pulled at 12:25. At 12:30 the Ewing turned around to restart GOA1301 with sufficient overlap and while on the turn the streamer configuration was fixed. In the turn between GOA1301 and 1302 a marine mammal shutdown occurred. Due to the presence of fishing gear GOA1302 had to be started north of where initially intended. GOA1302 had no significant problems until near the end of the line when a marine mammal shutdown coincided with the EOL. GOA1303 was acquired without incident in terms of setup and data quality however a third marine mammal shutdown resulted in a 2.125 km gap in the transect.

Operations: Three seismic reflection profiles, GOA2001, GOA2002, and GOA2003, were shot outside of Yakutat Bay crossing and within the Yakutat Sea Valley (site GOA07B). A 1500 m streamer was deployed, and two 45/45 cu in. GI guns were shot every 12.5 m in order to double the fold, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset was –111 m due to a stretch section and a single passive section towed from the bridal. GOA2001 went well with the exception of a loss of inertial GPS causing the Ewing to drift offline from shots 600-900. Maximum distance offline was 185 m at shot 650. Line was shot at 12.5 m spacing but was not entered correctly until shot 54 thus first 53 shots were at 25 m spacing and the first shot with both guns firing was shot 18. During GOA2002 the PC running SeisNet crashed causing shots 2658-2715 to not be recorded as SeisNet files. These shots were still recorded to 3490 tapes. Additionally, one marine mammal shutdown occurred resulting in 16 minutes of lost data (shots 4596-4836 missed). GOA2003 was flawless with the exception of the far offsets of the streamer being noisy for shots 30-130.

Operations:One seismic reflection profile, GOA2101, was planned for Disenchantment Bay and Yakutat Bay (sites GOA10A and GOA11A). A 750 m streamer was deployed, and two 45/45 cu in. GI guns were shot every 25 m, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset was –55 m due to a single passive section towed from the bridal. GOA2101 went well with the exception of the near bird surfacing from shots 645-663. However an acute angle turn after shot 1705 caused syntrac to be unable to continuing shooting. The line had to be restarted as GOA2101C with a gap between these lines of around 90 shots. Within a few shots of the planned end of GOA2101C the compressors overheated causing a shutdown of operations at SP 296.

Operations: Six seismic reflection profiles, GOA2501-2505, 2507, were shot linking the Bering Trough region to the shelf near the Bering Glacier(sites GOA05A and GOA06A). A 1500 m streamer was deployed, and two 45/45 cu in. GI guns were shot every 12.5 m, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset was –111 m due to a 50 m stretch section and a single passive section towed from the bridal. GOA2505 was shot north to south without incident although the center of the streamer was noisy, possibly due to currents, from Sps 152-2844. GOA2503 shot from south to north was a slightly noisy streamer near the beginning that quieted as the line progressed. GOA2501, a north to south line, was without troubles. GOA2502 shot from east to west in a following sea and thus was noisy. GOA2507 shot from southeast to northwest was less noisy but had a marine mammal shutdown for SPs 327-503 and one gun firing (ramp-up) for Sps 504-562. Remainder of the line was flawless as was the east to west line GOA2504.

Operations: A pair of crossing lines, GOA3102 and GOA3101, were shot across the site north of the Khitrov Basin (site KB-1). The north-south oriented GOA3101 ended within the Khitrov Basin. A 1500 m streamer was deployed, and two 45/45 cu in. GI guns were shot every 25 m and recorded for 8 secs due to water depth, with a five minute ramp-up

period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset was –111 m due to a 50 m stretch section and a single passive section towed from the bridal. GOA3102 shot from east to west with a noisy streamer (following seas). The Hydrosweep and thus the center beam depth was out of operation from SPs 100-176. GOA3101 shot from north to south was flawless.

Operations: Two seismic reflection profiles, GOA3201 and GOA3202, were shot across a portion of the Surveyor Fan (site GOA16B). A 1500 m streamer was deployed, and two 105/105 cu in. GI guns were shot every 25 m and recorded for 8 sec due to the water depth, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset was –111 m due to a 50 m stretch section and a single passive section towed from the bridal. GOA3201, shot from west to east, went well although there was substantial low frequency noise. Real time stacks were processed with the lower 50 Hz removed. GOA3202 was without incident other than the low frequency noise. Despite the noise basement was still imaged.

Operations: Two seismic reflection profiles, GOA3001 and GOA3002, were shot across and approximately down axis and cross axis of the basin(site GOA04A). A 1500 m streamer was deployed, and two 45/45 cu in. GI guns were shot every 12.5 m and recorded for 4 sec, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset was –111 m due to a 50 m stretch section and a single passive section towed from the bridal. GOA3002, shot from west to east, was near perfect. GOA3001 went fine until Dall's Porpoises caused a shutdown. An attempt a restarting the line failed as the marine mammals returned immediately upon restarting the guns. The line was broken of at that point. Approximately 2/3 of the intended line was successfully shot.

Operations: Two seismic reflection profiles, GOA2901 and GOA2902, were shot across and approximately down axis and cross axis of a basin between volcanic highs (site GOA01A). A 1500 m streamer was deployed, and two 45/45 cu in. GI guns were shot every 12.5 m and recorded for 4 sec, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset was –111 m due to a 50 m stretch section and a single passive section towed from the bridal. GOA2901, shot from northwest to southeast, included some missed shots when speeds got more than 5.0 knots over the ground due to the 12.5 m shot spacing. Additionally there were some issues with noise on tail half of the streamer that came and went. GOA2902, shot from southwest to northeast, went well with the exception of being fairly noisy throughout due to the weather.

Operations: Two seismic reflection profiles, GOA2801 and GOA2802, were shot across a sediment drift near Hinchinbrook Island in Lower Prince William Sounds (site GOA02A). A 1500 m streamer was deployed, and two 45/45 cu in. GI guns were shot every 12.5 m and recorded for 4 sec, with a five minute ramp-up period between gun starts following 30 minutes of observation by trained marine mammal observers. The near offset was –111 m due to a 50 m stretch section and a single passive section towed from the bridal. GOA29801, shot from northeast to southwest, went well although one

can died at the very end of the line which had to be swapped out during the turn. GOA2802, shot from south to north, went poorly due to a strong tail current resulting in either the shot going too fast over the ground such that shots were missed or to slow through the water such that the tail of the streamer sunk. At the beginning of the line we missed ~30 shots due to the speed over ground problem while for the remainder of the line we ended up living with a too deep streamer.