



**COMPOSITIONS**  
**WATCHSTANDER LOG**

**EW-04-04**

**EVENTS WITH EXPLANATION**



**COVER MADE FROM 100% RECYCLED FIBERS**

**VOL 1 OF 2**

**ESSELTE**

**JD HI-142**

Departure from San Juan PR 4/18 1305Z  
Transit to Beginning of Line 1

①

- GMT

10:30Z, 111. Arrived to first station - <sup>west end</sup> of line 1

Started to deploy mammal streamer. (3 hours behind schedule)

Wind is 20kn from East - Deploy into Wind 090

11:00Z, 111: Pulling <sup>mammal</sup> streamer out to take  
off some weight - Now wt 24K - Streaming  
at 18m

1200Z, 111: MMO streamer being redeployed to  
Boom Location

1256Z, Rain, Still working to move  
Marine Mammal streamer from Main Roel  
to boom.

1327Z Starboard gun boom swung out  
continuing work to move Mammal streamer

1347Z, marine mammal streamer disconnected.

1357Z marine mammal streamer deployed

beginning rigging of the tail

1430 Tail buoy in water

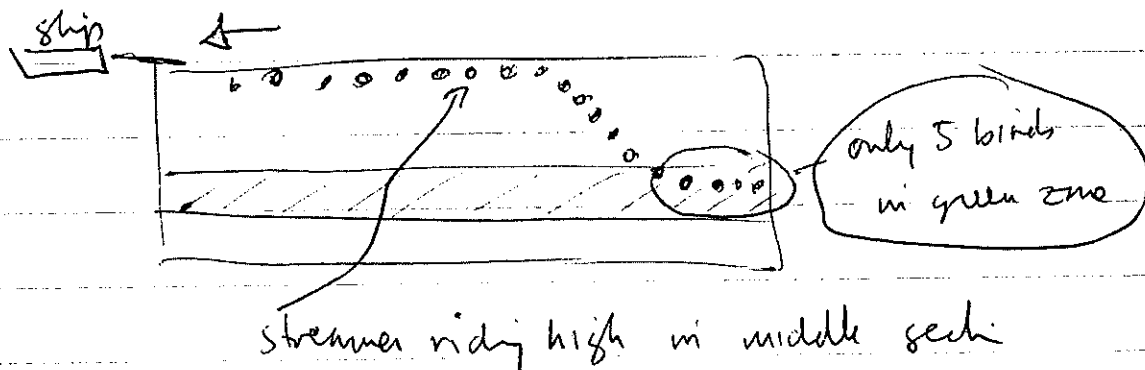
Beginning streamer deployment

One starboard gun lowered but not fired  
- provides tension on the boom

(2)

111  
(Tues) 1720Z ~~Coo~~ Bridge contacted by Venezuelan base on  
Monges Island. Adrian Alana talked to the base and gave  
them our position 20 nm from the island. The caller thought  
we were closer (11 nm). Base was informed of our  
correct position, who we were, our 6 km streamer,  
and all was OK. (P. Mann)

1743Z Birds riding at uneven depths. (19 birds out)



1828 Added weight to section 20-22  
though not enough weight to bring entire  
streamer down.

1854 Contacted by Venezuela Navy sailing "American ship"  
Adrian Alana attempted to contact without success (PM)

1935Z MMD Notified to begin 30 min Monitoring prior to first  
gun Test at 20:00Z

20:06<sub>2</sub> - III - Began firing 1 gun @ 850 psi - Confirmed by MMO

- MMO called to verify 1 gun and PSI

20:11<sub>2</sub> - III - All Birds in water & Monitoring

20:18<sub>2</sub> - III - Steamer fully deployed - all birds show proper level

20:26<sub>2</sub> - III - Notified MMO @ full psi w/ 1 gun.

21:18<sub>2</sub> - III - MMO - listening station confirms dolphins in Area

21:34<sub>2</sub> - III - MMO - Observer dolphins w/ Big Eyes.

23:10<sub>2</sub> - III - MMO Confirms ~~Sightings~~ Vocalizing - sound louder  
and assuming closer to ship - No Visual  
Verification. Gun ramp-up ETA - 30 min

23:37<sub>2</sub> - III - Science officer - Ted - meeting w/ MMO - Mari on  
Gunners Schedule

00:30<sub>2</sub> - Starting the turn

01:35 - first shot of the watch

02:07 - 112 - .5 km from beginning of 1st line

02:12 - 112 - flat line on gun 11

gun shop ok, gun is firing possible trouble w/  
phone

02:14 - 112 - started line 1

02:44 - 112 - gun 11 out of the water

03:06 - 112 - gun 12 flat line

Carl was adjusting gun box (GC)

0447 : Alarm - ? Gun? \* No gun flag data  
+ GPS

Spoke w/ gun shack, said some guns were slightly off, but shouldn't cause an alarm problem. Called Richard & he came and fixed GPS 04 - was not updating (?). In future call Richard for any alarm.

0523 Gun to Starboard Left of line -2.0, -1.8  
back on time 0524. -2.6

0525 Noisy channel 9, 10 ~~but~~ occasionally,  
but always comes back to normal levels

0706 No Data for interface ME Trimble GGA  
GPS 02 Warning  
Lost Data for GPS 02 Since 0704  
Not updating on Joe's screen  
fixed by Richard 0712

0830 From approx Shot 965 to 973 - tail buoy is drifting  
about 1 km N of line

0856<sub>2</sub> 112 - <sup>Raw data exceeds capacity</sup> Hydrowrap offline - Called Syst. Mgr.

0950 Gun 6 turned a darker green on the Gun Pulse  
Display monitor. Gun 13 is off more times than on.  
Shots 1143

0955 Gun 6 has improved

1146 1405 shot dead trace around ~ 37.5

1148 1408 shot error. (Scisheet QC display  
showed error)  
check SEG Y File

1226 - 112 - gun 20 flat line

1228 - 112 - gun 20 back on line

1240 - 112 - gun 20 flat line

1242 - 112 - gun 20 back on line

1242 - 112 - gun 20 flat line

1245 - 112 - gun 20 back on line

1257 - 112 - ~~end~~ beginning of turn

22  
10

1226-~~1344~~<sup>1344</sup> - 112 - gun 20 keeps flat lining and  
 coming back - gun still ~~appears~~ working  
 - ~~1344~~ ~~gun 20~~ ~~taken out of~~ ~~water~~  
 1322 - 112 - work begun on guns 19 + 20

1326 - 112 - back part of streamer (approx channels  
 34 - 39)

~~very~~ noisy

13

1331 - 112 - tension in streamer fluctuating due  
 to shortening of streamer ~~by 10m~~ <sup>turned</sup> no net change of length  
 1333 112 gun 11 off

1339 - 112 - HSF sensor on streamer noisy  
 mid section of the streamer high

<sup>-112-</sup> 1343 219-459 Sensor on streamer noisy

<sup>-112-</sup> 1345 236-324 " " " "

1410 - 112 - 265-25 channels (streamer) noisy  
 mid section to ~~begin~~ end of streamer  
 high

1417-112 - gun 26 back in water  
 gun 17 out of water due to  
 air leaks

1421-112 - gun 11 back in water

1424-112 - S6-282 channels <sup>still</sup> noisy (streamer)  
 mid section of streamer still shallow

1427-112 - 1-292 channels noisy (streamer)  
 mid-end of streamer shallow

~~1433-112 - 1-292 channels noisy (streamer)~~

1437-112 - ~210-~67 channels noisy (streamer)  
 streamer starting to come down  
 to 7 m

1439-112 - gun 17 back in water  
 all 20 guns in water  
 and working



1444 - 12-427-435 channels noisy  
 + 139-28 channels noisy

1448 - 112 - streamer - end shallow  
 mid deep  
 approx channels 36-116 noisy

1455 - 112 - all channels clear  
 starting at approximately shot # 1880

1499 - 112 - gun 11 flat line - still working

1501 - 112 - channels 250-268 (approx.) noisy

1504 - 112 - gun 11 back on line

1506 - 112 - all channels clear  
 streamer back within specified  
 depth

1513 - 112 - gun 11 flat line - still ~~was~~ working  
 according to gun shop

1523-112- gun 11 back on line

1523-112- gun 11 flat line - gun still working  
according to gun shop

1536-112- gun 11 back on line

1538-112- 250-260 channels noisy

1539-112- all channels ~ clean

1549-112- channels 440-450 noisy

1551-112- all channels clean

1623-112- GPS 02 failed alarm - fixed immediately  
by Trevor

1639, 112 Streamer was brought in 10m  
to do maintenance on the tow  
point. Tension at 0  
Gun 10 off  
Speed down to 3 knots

1654-112 Streamer back to original tow point

~~1700~~ ~~Beginner~~

1702-112 Gun 10 back on line

1744-112 Streamer shallow 15-19

Section noisy 9-18:1752

1246 213

070 06 469

1752-112 Gun 13 is offline for work/repair

Gun 1 has problems - also offline

Gun 1 fires intermittently

1800-112 Gun 1 firing again

1800-112 Streamer shallow 1-19

1808-112 Tailboom 1246 500 N Bearing  
070 08 575 W

1826-112 Streamer biting & coming down

16-19 back down 15-1 shallow

1848-112 Streamer back in green

1914-112 Gun 13 back on

1920-112 Gun 13 timing off

1944 Starting turn into line 2

1954 Streamer in green zone -

1956 Marine mammal people informed new line starting -

2005 → Pulling in gun 17

now 18 guns at volume = 6747

2010 → Gun 10 in, Gun 17 out

6597 ✓

2016 → Start shooting, shot 62 / File 2600

Lat → 12 45.589

Long → 069 57.046

2023 → 17 back in water

20 guns 6447.

Gun 15 coming out for untangling

System manager mentioned that some gather files are going to be recorded in our tapes. These files are test or trash files. What is important is to remember the ~~beginning~~ of the first shot point and end point of the different lines.

20.38 - All 20 guns back in water - 12.44.55b  
6069-55-966

112 2113 - Ship Approx 300m S of line - All birds/Stream  
Well aligned

2122 - Lost signal Bird 2

2200 - Ship ~~and~~ still approx 300m S of line, Birds drifting  
slightly further S of Course - Very heavy seas

2331 → Gun 13 is off? (shows darker green)

2332 → Gun 13 back on

113 0025 → Gun 11 is ~~flat line~~; out of water.

0033 - eol BOL2

113 0102 - Gun 12; out of water.

113 0116 - ~~SOL~~ SOL BOL3

gun 11 + 12 still out  
of water

113 0118 - gun 12 back in water

113 0122 - gun 11 back on line All guns in water

113 0152 - EOT 32

113 0153 : SOT 33

113 0224 : EOT 33

113 0225 : SOT 34

113 0417 : GPS02 lost conn. & fix

113 0530 : Bird 13 is down biting down  
have one of the streamer people  
change it (?) - Trevor

113 0544 Channel  $\approx 375-372$  is  
often dead on Syntron QC display,  
though appears normal on the other  
seismic display. (?)

113 0624 Talk to Richard about DDS4  
Script not running since Line 01

113 0738 GPS04 input lost : regained immediately

113 0810 Speed over ground 5.3 over water 4.11 -  
Bridge called to ck if affecting data -  
Maintaining 17 sec interval on shots

113 0841 Bridge contact - Birds going down at front

(14)

113 0841 - Tail buoy drifting approx 2 km W. of line

113 8.47 - Streamer sinking in the front part  
Birds 25-28. Now recovering ideal position.

9:00 - Birds 1-4 below ideal level

113 9:37 Birds 1-3 below ideal level

113 1028 Birds 1-4 below ideal level <sup>13 22 321</sup>  
<sub>69 49 227</sub>

113 1041 All Birds Back in Ideal zone <sup>13 23 288</sup>  
<sub>69 49 347</sub>

113 1246 guns 11 + 12 turned off

113 1253 gun 11 back on

113 1330 gun 12 back on

113 1334 gun 15 turned off

113 1337 guns 16 + 17 turned off

113 1344 gun 15 back on

113 1345 gun 17 back on

113 1353 gun 16 back on

113 1439 around shot #4685  
 3023. Stop.

14:49 There has been a medical emergency. Captain has ordered guns stopped + all gear pulled in for probable trip to medical facility.

113 1530 Recovering streamer, waiting on decision about medical emergency.

113 1548 Streamer being brought in.

113 1548 Tail buoy alarm disabled.

113 1700 Plan announced to bring helicopter from Aruba to pick up injured person using a rope ladder from helicopter

113 1722 Tail buoy pulled aboard - all gear aboard

113 1742 Helicopter en route with doctor to assess if patient can be lifted off (30 mins avg)

113 1746 Speed resumed to 6.3 kts SOG to the NB

113 1830 Decision made to take ship to Aruba in order to deliver patient to hospital - ETA 7 hrs



113 1909 We are now heading south to meet w/ Seward Johnson & proceeding to Aruba.

113 21:30 Heading south close to Bol-3.  
Trying to resolve steering problem and transfer of patient to Seward Johnson.

114 0200 We have joined up with STII. We decided not to transfer patient to STII because Ewing is going into Curacao at dawn tomorrow. We expect to stand off Willemstad until dawn. Then we have tug set up to take us in. Then we will have a diver take a look at the steering system.

114 0745 Arrived several nm off Willemstad harbor. Seward Johnson 2 nm away. Waiting to transport Carlos in am. and tug to guide Ewing into harbor.

114 1200Z Still standing off Willemstad. cables  
looked good at break Port. Waiting for  
tug to go into Port. STII may follow  
or not depending on dock availability  
and cost.

114 1245Z Watch suspended <sup>DSS</sup> as we come into  
Port on Curacao

1815 Left Dock in Curacao - Start Sea Trial

118 2007 - Testing rudder, complete - ABS  
inspector leaves ship.

Move to deployment point for  
line BOL-6

2230 - Slowing down to start deploying streamer

- Make manual 1/2 hrs. observation

2248 - MMD Hydrophone deployed - Starboard  
gun boom <sup>in position</sup> ~~set~~ and gun # 5 in water

2302 - Single gun firing - 80 cu. in.

2315 - Tail buoy in

2317 - Powered up streamer

2321 - 3 streamer gages in

2330 - bird 1 set at 7 meters

2333 - bird 2 set at 7 m

118 ~~1009~~ 2336 Brd 3 set 7 m

118 ~~1009~~ 2339 " 4 " "

118 ~~1009~~ 2342 " 5 " "

118 ~~1009~~ 2344 " 6 " "

118 2347 " 7 "

118 2349 " 8 " "

118 2354 9

119 0004 " 10 "

119 0011 11

119 ~~0020~~ 12 11.7 mts.

119 0026 " 13 "

119 0034 " 14 "

119 0042 " 15 "

119 0052 " 16 "

119 0141 " 17 "

119 0153 " 18 "

119 0203 " 19 "

119 0212 " 20 "

119 0218 " 21 "

119 0222 " 22 "

119 0225 " 23 "

119 0224 " 24 "

119 0233 Bird 75 set 7 m

119 0237 " 26 "

119 0240 " ~~0227~~ "

119 0244 " 78 " (last bird in  
the water)

119 0255 streamer in the water

119 0428 Tell Ted that tension & PSI  
are not updating on Joe's screen

Wake Mari @ 2:30 am to begin  
watch for ramp up

119 0549 Claudio has been rearing large  
groups of Dolphins

119 0800 Turning to line 6 and  
ramping up guns. Marine observers  
notified.

(20)

119-8.19 Preparing to start line bol-6  
Tape number set #60.

First shot # 6000 File #6000

119 8:18 Starting line 6.  
16 guns on @ 4772

8:20 - All guns on. 6697 vol.

- Still turning but already shooting line
- Streamer sinking at beginning of the line.

Problems with spectra.

Recording but header is not getting across

Spectra doesn't show any confirmation of shots. Since the beginning of the lines.

119 8:30. We are in shot # 2043 and the problem with the header continues. Still recording but spectra does not show confirmation.  
Richard working on it.

Streamer is still turning and it looks good on target depth.

119 8:38. Shot # 6069  
Richard is stepping the line (Bol-6) to fix the problem

Enable line. Shot # 6074. Last shots from 6070-6073.

The problem continues, no header is written.

119 0910 - Over 20 back on line - All 20 guns firing

(22)

119 8:43

Spectra now shows confirmation  
of the shots.

Every thing seems to work  
fine after re-starting spectra  
shot # 6074 (Line BOL-6)

Maggie is not working  
properly → Ted working on it  
119-0910 - Guard Back in water - All guns up  
119. 0924 - Maggie out of water

119 0925 - Tail in line over line

119 1202 - ~~File~~ file # 6682

channels 48 and 2<sup>36</sup>~~00~~ noisy

channels are noisy consistently

119 1205 - File # 6672

channel 65 noisy consistently

gun 15 turned off

file # 6704

~~Don't have 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 131~~

channels 374<sup>3</sup> 377 <sup>quiet</sup> ~~can~~ consistently

file # 6718

channel 54 noisy consistently

open 15 back on

File # 68560

Account 47

File # C450

channel 54 clear

file # 7004

channel GS clear

file # 7008

channel 47 clear

gun || turned off



J Day TIME

COMMENTS

119 1422 gun 11 back on - all 20 guns on

119 2006 Tail drifting to N of line about 300mts.

119 2035 Tail drifting to N of line - 400m

- Discussion - Ted/Dutman/A. Escobar about  
Charging out section of Steamer Channel 373  
possibly during OBS run.

119 2039 - Bird 22 appears to be sending data -  
Is transmitting - Orientation problem

119 2100 - Aljardas Killed the Birds!!!!  
by pressing Shift Home on Keyboard

2105 - Resetting system - Birds - Ted's doing  
much to plant!

2106 Shot-8290 - Birds Back!

2110 Lost Birds while resetting 22 - birds back  
at 8301 - shot

119 2340 Alarm GPS (No Gun Flag data)

Richard working on it, OK.

119 2345 - Gunshot - Resetting guns 9-10.

119 2349 End of line # 6, ~~Sta~~ File 8705

Lat 12°37'890 Long 069°48'842

(25)

J DATE TIME

COMMENTS

119 2352 Turning to line Bol 4

119 0004 Guns 08, 09, 10, 11, 12 flat line.  
Vol 5302. Shot Nro: — File Nro: 8792.

119 0045 Gun 08 return, back on. Vol: 6152  
Shot Nro: — ; File Nro: 8792.

119 0103 Gun 08 flat. line. Vol. 5302.  
Shot. Nro: — File Nro: 8792.  
starting the turn to line up for the  
line

0136Z Sit + 1389 - first shot on Line BOL-4  
Just passed OBS 129 going South

120 0141Z gun 8 back on - 16 guns in the water

120 0144 gun 9 back on - 17 guns in the water

120 0153 Gun 10 back on; 18 Guns in the water.

Date	Time	Comments
120	01:59	Gun 12. back on; 19 Guns in the water.
120	02:03	Gun 11. back on; 20 Guns in the water.
120	1517Z	<p>Chart shows &gt;50m water depth but our profiler shows 27m.</p> <p>We may need to turn off line sooner than expected.</p> <p>Disregard the above — The question emerged because we were looking at the poor chart on the Science lab D Kart system. DSS</p>
120	1423	<p>Pulling Guns <del>9-12</del> <sup>9-10</sup> to begin turn</p> <p>9-12</p> <p>EOL BOL-4</p>
1719		<p>Shot spacing in turn probably irregular — Set to 20 sec but seems to be missing some alternate shots. Compressors did not come online when requested.</p>

(27)

120 1743 Shot 131 (file number 10,000) marks the start of Line 3 (heading north). Shot spray is 50 m (MCS). Ship is still turning so streamer is not straight.

120 1749 Completed turn on Line 3 going north

120 1819 All guns back in water

120 1828 Streamer is back behind

1834 287 - Last Shot on Line ~~BOL3~~

BOL3 - just after the turn

to start BOL3 part 2. We had to do this to avoid <sup>a</sup> renaming issue. Line now called BOL3A

1836 290 Shot to begin Line 3A

We lost 2 shots due to the naming issue

2231 Seisnot screen is black reel #103

? what is problem

shot 1020 File 10887

Lat 1203.755

Long 69 39.828

2241) 1038 shot back in business (File 10905)

reel # 103 - replace data

dump data from 3490 to  
the archive (DDS #3 tapes)

Lat - 1204.124

Long - 69 31.862

2338 Birds 23-28 flying below level - currents

2348 - Birds back on level - #20 still coming up

Tail still approx 1K w/ line

12! 0109 - middle and tail end of streamer high

lots of birds running very shallow

0125 - gun II ~~flat~~ flatline, still working

0130 middle of streamer back in range

tail end still shallow (Birds 1-9)

0145 all birds back in range - streamer looks good

0156 gun II pulled out of water

0326 gun II back on and back off again

(29)

04:16 Gun eleven is on the water.

0553 Stopping line 3A, starting line 4A

Lat 12° 39.819  
69° 44.137

0556 Starting line 4A (150 m shot spray)

File number 13000, 792 shot numbers

Lat. 12° 39.931  
69° 44.148

121 1346 guns 1 + 2 turned off

121 1409 guns 1 + 2 back on

121 1412 gun 17 turned off

121 1414 gun 12 back on

121 1420 gun 18 turned off

121 1441 guns 17 + 18 back on  
gun 13 turned off

121 1506 gun 14 turned off

121 1510 gun 13 back on, gun 12 turned off

121 1511 guns 12 + 14 back on

121 1513 gun 15 turned off

121 1525 gun 15 back on, all 20 guns back in the water

121 1830 ~~1830~~ Advised engineering that we are 30 min away from 150ms to 50ms shooting - <sup>air</sup> (compressor

(150m rate) (50m rate)

121 1854 changed lines from 4A to 3B, missed 3 shots due to compressors powering up in engine room. Engine room was alerted 30 mins prior to changeover.

121 2020 - Tape 125 does not exist

Tape 127 - ejected w/o notice - need Steffen to determine final shot / fbe / Lat / Lon / Time

~2300 noticed that file number on tape differed  
from file numbers on "Syntron control panel"  
display approx ~ 55

122 0118- engine room reports problem with compressor  
gun shop says that we may miss  
a few shots

122 0127 no shots were lost due to problem  
with the compressor

122 0327 middle of streamer high (birds 14-19)  
channels ~210~360 very noisy

122 0400 Streamer back into the green zone

122 0511 Gun 16 and 17 were take off

122 0522 Official End of the line. 1 hour extension

122 543 111 Gun back on.



S12 → Finish turn 8km off of line 4B

Trying to start spectra before the beginning of the line but it didn't work.

Shooting on cycle again and waiting to be on the beginning of the line.

122 0847 - Mural shots 2 & 3 & 4 - Switched to Cycling Bol 4B. Restarting line - shooting / not mural / shot on tape 146 -

Problems with spectra. It is not shooting in external cycle. Therefore we are shooting on cycle to keep the shots going while Richard and Anthony fix spectra.

122 Shot # 9 was the first shot  
8:53 . tape # 147  
Back on business

(33)

122 1218 gun 10 intermittently off  
usually out for no more than  
1 shot at a time

122 1232 shot # 21~~1~~7 file # 174~~8~~9  
Lat H H. 386 Lon 069 55.449

122 12<sup>40</sup>~~30~~ gun 17 turned off  
gun 18 turned off

122 1251 gun 17 back on

122 1252 gun 18 back on

122 1253 gun 2 turned off

122 1254 Dale turned the 3.5 kHz off

122 1317 gun 2 back on

122 1533 gun 10 turned off

122 1535 gun 9 turned off

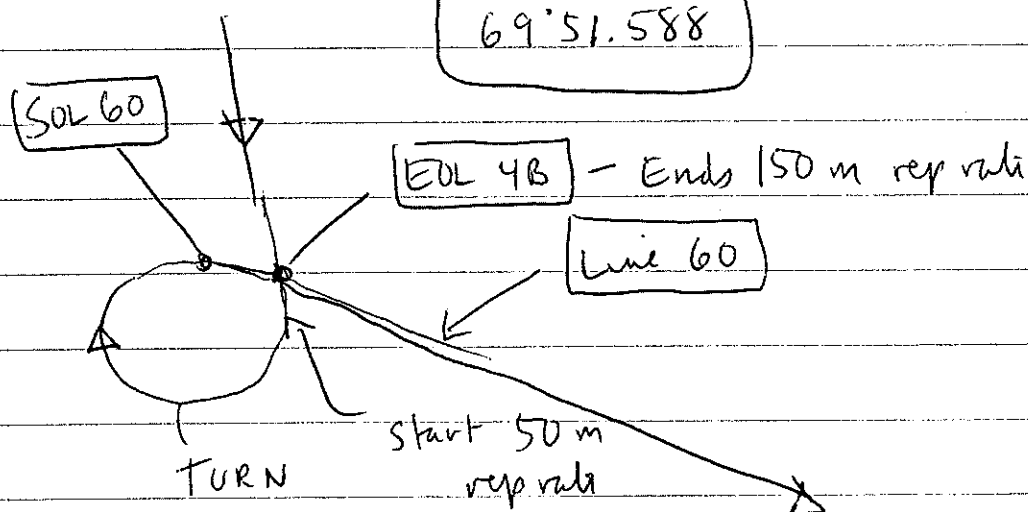
122 1944 gun 9 back on

122 1547 guns 10 + 12 have been  
 flat lining and coming back frequently  
 during this watch. gun shop reports  
 that the guns are still working  
 and it may just be a problem  
 here in the lab. gun 10 was  
 pulled out of the water at  
 1533z.

122 1933 EOL 4B,

13'41.293

69'51.588



122 1944 Guns 17 & 16 off, 9 & 10 also  
 1952 Guns 18

(35)

122 - 21:23.

Beginning of line 60 (Approach for spectra)  
Streamer is still turning  
and getting to depth.

122 - 21:25 All guns up.

123 - 02:15 Gun 16 turned off

123 - 02:17 Gun 15 turned off.

123 - 03:39 Guns 15, 16 back on

123 - 09:27 → GPS 04 is keeping

123 1252 gun 10 turned off

123 1257 gun 10 back on

123 1258 gun 11 turned off

123 1304 gun 11 back on

123 1306 gun 17 turned off

123 1311 gun 18 turned off

123 1323 guns 17 & 18 back on

123 1416 gun 1 turned off

123 1441 gun 1 back on

123 1613 Maggie in the water

124 00:51 Gun 9, 10 turned off

124 00:56 Gun 6 turned off.

124 00:55 EOL BOL-60.

124 02:42 SOL BOL-60

124 0332 gun 17 pulse height ~~lower~~  
than normal, called the gun  
shop to figure out what was  
going on, (0340) gun pulled  
out of water

124 0451 gun 17 put back in, but  
only fired a couple of successful  
shots - still working on it

124 0451 Streamer is very noisy

124 0457 gun 17 fixed.

10/24

## Line 61

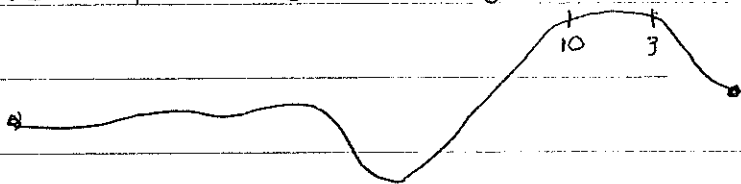
(37)

1018 Trace 209-300 extremely noisy due to birds  
13-17 coming close to the surface  
shot ~ 1200 - 1281

The streamer hasn't been at the right depth, mainly in the central part, But now some birds are getting to the surface. Records are extremely noisy

124 10:29

The streamer is still not at right depth.  
Birds on the surface are 10-3.



124 10:42

Streamer getting back to normal  
Birds 1-2 still off. Shot #1282.

More than 80 shots with abnormal  
depths on streamer.  
10:45 All Birds back w/in limits

(38)

- 11:19. Average GPS data not  
working well. Test working on it.

124

1128 birds 16-19 are well above the green "target depth"

1131 birds 16, 17 reaching surface shot 1400

- 13-20 above line (15, 16 surface) - <sup>shot</sup> 1414

1138 - 13-16 above (13, 14 surface) shot 1424

1144 - 6-12 above - shot 1439

1149 - 2-9 at Surface - shot 1453

1158 Birds Back on level shot 1476

124 1318 gun 3 turned off due to air leak

124 1330 guns 9 & 10 turned off for the turn

124 1333 EOL BOL 61 last shot 1738 last file 24335

124 1358 gun 3 back in the water

124 1420 SOL BOL 7 1<sup>st</sup> shot 173 1<sup>st</sup> file 25000

124 1443 gun 9 back in the water

124 1444 gun 10 back in the water



124 2216 - Shot 1588 (F-26415) Birds 23-28 below level

2220 Birds back in line (1599 - 26427)

2251 - Birds 24-28 below - (S-1690 - 26518)

2256 - Birds Back in line - (1703 - 26530)

125 0514 - Hydrosweep shut down

unexpectedly due to ~~excessive~~  
~~backfire~~ zooming in & out  
rapidly. Anthony got it working  
again. 0516

125 0926 - Gun 15 off line

1023 - Gun 15 back in water

125 1110 - Begin Runout (60) shots for End of Bol 7

11-36 464 68-51-604

125 1118 - Gun 10 - off line for the turn

1124 - Gun 9 - off line for the turn

125 End of Line Bol-7 last shot 3.852

Last file 28680 TIME 1132.

125 1309 SOL BOL 62 1<sup>st</sup> shot 1 1<sup>st</sup> file 28900

125 1314 gun 9 back on

125 1315 gun 10 back on

125 2058 Pass over line Bol 63 11 25 630  
68 27 569

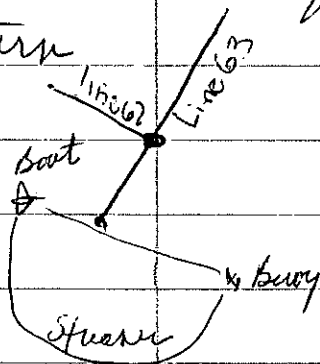
125 2123 End of line Bol 62 11 24 987  
68 26 115

2124 Guns 9/10 out - Starting turn to Bol 63

125 2253 - Run in (#5 slot) Bol 63

Streamer 400 m off track

Completing turn



Guns 9/10 still off

125 2301 - Stopping line - w/ <sup>shot</sup> 31021

2301 - Log back on w/ 31029

Will have data w/ Headers wrong No Navigation

2308 - ~~Good~~ Guns 9/10 back on line

(42)

125 23:33 GPS 02 is not updating.

2335 - GPS 02 is Back on

- Crossing Aim Point Bol 63 (31116)

126 0247 Gun 16 Turned off, due to  
need for repair, will be off for a while

126 0249 Gun 15 back on; and Gun 15  
turned off. (gun 15 missed one  
shot)

126 0253 Gun 15 turned off.

126 02:54 Gun 17 turned off.

126 0303 gun 17 back on

126 0311 gun 15 back on

126 0441 gun 16 back on.

126 0657 We noticed that the stack job has  
not made progress since 02:35.  
Also, the graphical display of shot trace  
gather on the windows box is having  
problems (e.g. only showing menu/toolbars)

126 07:21 Anthony started things up again. We lost some data that will have to be recovered from 850MB tapes. When it <sup>broke</sup> started?

126-07:19:19-When it started recording again  
Possibly 3 hrs? lost

15  
ne

Current tape/Reel 270, 12 tapes lost?

Shot 856 BOL 63 was the last shot.

That shot corresponds to Reel 264

They will fix this at 8am during the Line Change..

126  
1073

108 → change DDS tapes

no new tapes, so we left it alone

1134 - Guns 11/12 off

126 1148 - End of Bol 63 (Shot 2120 file 33115)  
- Turning to Bol 8

126 1318 SOL BOL 8

(44)

126 1319 beginning and middle of the streamer is low, this is causing noise in the last half of the channels

126 1328 Gun 12 back on.

126 1332 all birds back in the green middle channels are still noisy

126 1714 DKART stopped updating about an hour ago - Richard is restarting it

126 1702 guns 11 & 12 pulled out of water for the turn onto BOL 9

126 1705 EOL BOL 8 - last shot 678. last file ~~34676~~  
34676

126 1710 guns 8, 6 turned off ~~off~~  
during turn coming onto line BOL 9

126 1720 guns S, G back in the  
water ~~and~~ - still not on  
the line BOL 8:

126 1854 SOL BOL 9 1<sup>st</sup> shot 3 1<sup>st</sup> file 35000

126 1887 gun 12 back on, middle of  
the streamer is low - noise in  
middle channels

126 1911 gun 11 back on, all birds  
back in the green, channels 50-250  
noisy

126 2255 → When the DDS-2 tape ended I noticed  
that the line on the on the interface  
of the computer was BOL 8, but  
~~the~~ were actually at BOL 9. Some confusion  
exists for tapes 19 + 20. Should we  
write BOL 8 or BOL 9?

I wrote on the DDS tapes, that  
they contained the end of BOL 63, the  
start + end of BOL 8, + the beginning of  
BOL 9.

(46)

127 0105 at approx. 0100 the streamer  
went dead. there is no  
wiggle plot, the syntron  
displays have all gone  
unresponsive. power was  
lost to the tailboom  
the streamer is unresponsive  
beyond can 14, the line was ended  
last shot 1081 last pile 35974  
BOL 9

the array is being brought  
down by 6 guns to aid  
in bringing in the streamer  
for repair.

(47)

0620

127 0620 For the last 3 hours, the streamer has been partially brought in board to replace a bad can.

In the process of bringing in the streamer, two sections were damaged & need to be replaced. At this time (0620) one section was replaced, but this section was bad & will have to be replaced. Not clear if its a factory defect or was damaged in shipping. Initial estimate of job was 4 hours but this may now be longer. We are now 9 nm east of the transit line. Our speed is 3.8 kts so our ETA to reach the line is 2.25 hrs (5 am).

127 0637 New section checks out OK ("new" = replacement of the replacement section)

127 0706 Second section replaced - checks OK OK.

817 Bird 23 set to 7 m

841 Bird 24 set to 7 m

845 Bird 26<sup>25+</sup> set at 7 m

456 8 guns in V. 3771

959 Bird 27 set

1005 Bird 28 confirmed

2100 Streamer set



(48)

127 1026 - Strainer deployed - 8 guns firing (3771)

Transit to line 11

1141 - 10 guns in at Vol 3037

127 1332 8 guns in at vol 2657

127 1345 9 guns in at vol 2667

127 1435 MMO's notified to begin observational  
period prior to gun ramp  
up

127 1538 beginning the turn to come  
onto line BOL 11

127 1649 11 guns in at vol 3052

127 16: Starting BOL-11

(49)

3721.)

127 1613 Fumhel turn onto 11

~~first shot is 1499?~~

1615 We started BOL11 but the shot number was not updating. File number was advancing w/ shot data however.

1617 We are stopping BOL11 to fix the no shot point problem.

1518 is the first shot number

36017 is the first file number

BOL-11 ~~back~~ now recording good

127 1635 All guns back in water

~~1829~~  
~~1518~~  
~~117~~  
~~4589~~  
~~16017~~

127 1923 Waypoint 912 A for turn  
ETA 1855 local : 055

~~403~~  
~~16017~~  
~~16017~~

127 2004 Gun # 8 ~~off~~ turned off.

127 2054 Gun # 8 back on.

~~16017~~

(50)

127 2105 - Guns 11/12 out for Turn  
# 07 - Gun 13 - out - Targeted.  
2109 - End of Bol 11 - begin turn to Bol 12A

# 2158 - Start of Line Bol 12A - First shot 5704  
File 37000

2238 - 19 guns in the water.

2247 - Ship will steer  $5^{\circ}$  to starboard to  
get gun 11 into water safely <sup>Shot 5848</sup> file 37144.  
offsite of line by 100m

2250 - All guns in water/firing Completed  
maneuver for gun deployment

128 035940 last shot # 6766 fired before  
line was paused to allow  
for land shot

128 040322 first shot # 6777 fired after  
line was paused to allow  
for land shot

(51)

0429 38 6855  
128 0425 Last shot was ~~6855~~ fired before line was  
paused to allow for land shot

12A

5704  
7000

043303  
128 3303 First shot was 6865 fired after line  
was paused to allow for land shot.

to  
5848  
37144

128 0459 Alan Levander called to  
report land shots were successful

128 0928 - Guns 9/10 off for turn to 12B 13

0943 - ~~End line 12A~~ Gun 6 down

0946 - Last shot 7787 - 12A End of line 12-A.

128 1023 Start 3.5 KHz in turn of  
ship

128 1113 Start of line 13 (OBS line)

First shot #18 File # 40000.

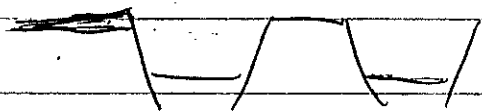
Guns # 6, 10-12 still out of the water.

128 1117 GUNS 9, 10-12 back on.

1125 GUNS 6 back on. but does not

(52)

~~show~~ show that it is on. in the  
computer screen.



128 1255 gun 6 turned off  
shot # 117 file # 40099

128 1347 gun 6 back in the water  
- still problem with screen not  
showing the gun working

128 1501 Guns 5 + 6 both turned off  
for repair

128 1507 gun 5, 6 back on

128 1534 gun 6 turned off

128 1940 NO RT Gravity Data

2004 - MMO's hearing dolphins or Hydrophones

128 0050 - XBT data taken

129 0821 3.5 KHz . We just  
notice that is not working.

129 0921 - Gun 13 off

129 0944-1006 - Note large change in depth - 2996 - 4796 -

~~129 0944~~ this may coincide w/ change in Hydrophone  
screen - noted @ 1055.

129 1126 starting multi beam Control.  
when Ted woke up

129 1132 - Ted is working on 3.5 MHz +  
multibeam.

3.5 KHz stop at 6:15 GMT.

129 1231 - gun 13 back on - all guns  
back in

(54)

~~B~~

129 1342Z (from MM spotter) Bowriding Dolphins Shot number approx ~1569

129 1345 19 guns shut down due to MM (dolphins) last shot ~1572

129 1349 all guns off due to dolphins

129 1400 - Mari gave clearance to begin ramp-up of guns -

Plan is to turn back onto line at location ~~for~~ before shutdown. Will begin firing one small gun

129 1402 - they ramp up during turn, gun 5 back on

129 1411 gun ~~11~~ back on (ramp up begin)

129 1417 guns 1, 20 (4 guns total) back on

129 1422 EOT 340 - tape 340 was taken by Richard so that the exact shot number and shot location of the last shot could be found

129 1427 guns 2, 3, 4, 10 (8 guns total) back on

129 1429 guns 14, 17, 18, 19 back on  
(12 guns total)

129 1437 guns 6, 7, 15, 16 back on  
(16 guns total) - last 4

129 1454 guns will stay out for the turn back <sup>onto the line</sup>  
Richard decided to create a  
new line (BOL 13A) to  
go back to the missed shots  
and recover the missing data

129 16:08 Started Line 13A

after completing a loop back  
due to dolphin sightings

Guns 8, 11, 12, 13 still out of the water

16:23 Gun 8 in, 13 in

16:29 All guns back in

129 1950 incorrect sound velocity file  
in hydrosweep occurred after a reboot earlier.  
C-keel was off  $\approx 1.5^\circ$ . Richard fixed it



(56)

129 2345. There is a problem with Hydrosweep. Ted ~~is~~ is working on it.

129 0249 fan tail monitor went out

130 0944 - Guns 11/12 off for turn off line 13A

0949 - Gun 9/10 off

0950 - Over OBS 201 - End line 13A starting turn to line 12B

1130 - Starting line 12B file 44000 shot 28

11:36 Real shot # 38. for the beginning of line # BOL 12B.

Previous shots = from 28-37 = 150m.

130 1409 middle of the streamer is high (birds 14-19) - noise in the middle channels

130 1500 streamer back in the green  
- all channels clean

130 1657 Sea turtle - Power to 1 gun ~~448~~  
979 - last shot w/ all guns - 44945  
13.42.7d  
067.39.907

130 1659 Starting turn to loop back  
Notifying Gun Shop of turn

130 1703 Decided to not turn because  
data gap will be insignificant - pelagic  
sedimentation. Bridge advised to  
go as slow as is reasonably possible  
~~down~~  
Ramp up can begin 17:12.

130 1709 Ramp up is ~~beginning~~ beginning - from MMO  
Shot 1816 F: 44982 2 guns  
Notifying Bridge

130 1716 - 4 Guns

130 17:36 All guns back in  
Shot 1085

2224 - Guns 11/12 off line

2315 - Guns 11/12 Back in water

131 06:01 The Streamer has  
been feathering  $\approx$  1-2km  
to the west for all of  
line BOL 12B

131 9:27  $\rightarrow$  Hydrosweep gave incorrect values  
for a few minutes

131 10:11  $\rightarrow$  the DDS 1+2 screens do not show  
the proper GUI's. They may not be  
recording correctly.

131 13:31  $\Rightarrow$  Gun 08 back on



(59)

131 1413 stack job gui is writing  
CBD error to screen  
affecting shots ~~4040~~, ~460, ~4710

131 14:34 Stack job started producing  
"centerbeam depth jumped by"  
Primary GPS occupied, GPS04 restarted  
Richard fixed it.

2147 - Pulling guns 9/10 for turn

2152 - End Bol 12B - Yeah!!!!

~~2153~~ -

2234 - Pulling guns 11/12 for turn

2239 - 3.5 kbl <sup>Tuned</sup> off DSR

131 23:04 Starting line BOL-15  
Gun 12 still offline

132 04:45 Gravity Died. RT Gravity

132 0505 Gravity Back on

(60)

132 0558

Sioseis was ~~st~~ accidentally  
shut off by Richard.

Shot 1268 - 1272 ?

52225 - 52230 ?

Richard will <sup>took</sup> take the tape

0809 End run is shot 1655 file 52314 Tape 29  
turning to 16 - guns 11/12 out for ten

1019 Behind of the line Bol 16.  
Lat  $12^{\circ}07'280$  Long  $067^{\circ}17'127$   
All Guns working

132 1219 Bridge called to inform that  
CBD is approx. 2x what  
it should be.

132 1223 Richard began work on hydrosweep

132 1230 problem with hydrosweep appears  
to be fixed

(61)

132 1258 ~~Karl~~ stuck job began producing  
CBD errors

132 1347 a section of the streamer has  
been noisy for about the last  
hour and a half affecting channels  
130-150 approx. - noise seems to be  
getting less pronounced now

132 1702 Gun screen gave a  
run-time error floating pt divide by 0  
Karl\* began fixing immediately  
Guns are still shooting, but E&C  
screen is not updating. Will  
have to reboot

17:09 1138 / 54114 Last shot/file Reel 435

Rebooting the Gun & C system

1141 / 54117 after reboot - but E&C  
is still down/frozen

17:14 1153 / 54130 Reboot

(62)

17:16 Cycle / ~~Reel~~ <sup>Shooting</sup> - failed w/ same error  
1162 / 54138  
Same Error

17:17 Reboot GCS 90 -  
Back on @ 1167 - same error  
Reel 436

17:20 Reboot GCS 90

17:22 Loaded old software GCS 90 & it works

1178 / 54154 New software Corrupted

17:24 1180 / 54156 Stopped Shooting

17:26 Same error : going to reload GCS 90 from Disks  
1190 / 54166

17:34 Fired Guns Manually - Still  
working on GCS 90

17:40 Fired Guns  
1231 / 54208

17:42 Back on line changing to External  
1237 / 54213 first shot in External fire

(63)

In summary...

17:47 We missed shots: 1138 - 1237

Reels: 435 & 436 File: 54114 - 54213

It is now fixed.

DDS Tapes 142 #29

132 18:00 Sperm Whale sitting w/in  
radius. ~~Ramped down to~~

~~one gun. Powered off gun~~

Ramped down to one gun

18:07 one ~~the~~ dived (dove?) & one at  
surface, hearing clicks on SeaMap

18:11 3 Sperm whales at surface  
in front of us.

18:19 3 Sperm whales now behind  
the ship - should pass out  
of safety zone shortly -

132 18:27 Ramp up beginning

Gon shop notified

let bridge know when ramp  
up complete.



(64)

132 1831 Guns 1, 5, 9, 20 in water

1835 Guns 3, 10, 11, 12 in water

1843 Guns 2, 4, 14, 17, 18, 19 in water

1855 Guns - All guns back in

Notified Bridge & NMO

1857 Power down - Turtle in radius  
one gun still in

1907 Gun ramp up begins

1908 Guns 5 & 20 in

1913 1 & 9

1917 3, 10, 11, 12

1921 2, 4, 14, 17, 18, 19

1927 6, 7, 15, 16

1931 All guns back in

19:45 - We merged Line 16 & 17  
into one Line 16.

That change/suture occurred  
at 1634 → 1635

133. 0304 Sigeis screen went blank after  
attempt to adjust window - Richard  
working on it

(65)

133 0317 sisseis back on after Richard  
fixed it

133 0624 → several retrievals of tape 456 →  
up to 7

133 0916 GUNS #9 and 10 turn off.  
0926 GUN #13 turn off.

0928 End of the Line 16.

1058 GUN #13 back on  
1100 GUNS #11 and 12 turn off.

1114 - Begon line 47 slot 60 file 5700

1118 - All guns in water - firing

1135 GUNS #8, 9 and 10 turn off.

1147 All guns back in - on line

133 1836 Chief engineer would like to shut down a compressor in  
the turn in order to switch out compressors. Need to call him  
before he ends line in 50 nm so about 2 am on Thurs.

(66)

133 2250. Seisnet, gun out steel running  
shot 2041 (screen ~~black~~ black);  
Richard working in 1 $\frac{1}{2}$ ,

2301. Seisnet systems, back on.

134 4:53 Seisnet had error box - then  
quickly goes away, then tries to catch up  
Seisnet  
Down - 3107 - 3123 in the shot numbers.  
It finally froze on 3107 & Anthony  
~~restarted~~ restarted Seisnet. ~~was~~

134 06:06 Guns 11 & 12 off

134 6:19 → EOL - 1147

134 06:25 Gun 13 Turned off

134 0720 Gun 13, 12 back on

134 0733 All Gun back on

134 1224 Dietmar noticed that there were  
some error messages in Sytron  
operator display that indicated that  
at some point last night 6 shots

(67)

(nonconsecutive, 2 in groups of 2 and 2 split by one shot) were missed over the course of approx. 120 min

Times for the ~~first~~ missed shots:

~ 0446 (2 <sup>consecutive</sup> shots)

~ 0450 (2 <sup>consecutive</sup> shots)

~ 0455 (2 shots with a missed shot in between)

134 1307 Seisnet screen blank affecting shots <sup>starting at</sup> approx 1020 -

(Steffen checked last shot written over to heezen approx 1009) -

Ted and Dietmar worked on the problem for approx 10 min

before going and getting Richard - Seisnet crashed and had to be restarted (~1313) but still not recording data over to heezen

134 1317 Richard said we were back online starting with shot # ~1063

~~Richard doesn't know why it crashed~~

(68)

134 1453 Seisnet crashed (shot # ~ 1341  
file # ~ 61745) - Richard working  
on it - screen went black, computer  
turned itself off  
- Richard decided to go to a  
new system that excludes ~~the~~  
seisnet and ~~the~~ uses the 3590s  
to write the files to the DDSs

134 1550 ~shot # 1505 ~file # 61910  
seisnet back up shots being  
sent over to heezen

134 1559 Richard stopped the disk, DDS2,  
and DDS jobs on heezen to avoid  
confusion later when the tapes  
are being rewritten to cover the  
data gap created when seisnet  
~~the~~ crashed at 1453

(69)

134 18:14 Syntroon Buffer error

DCP: dcof x 5 times

on streamer display

~~1930~~ - ~~1931~~

1935

Before Shot 1930 BOL 19

Lost 5 shots

19:17 Syntroon Buffer error

Lost 7 shots ~2100

19:20 Stopped Stack Job

Turned off seisnet as possible  
cause of buffer errors.

F4 - shot / buffer screen

F7 - normal screen

~~F5~~ F8 error screen

134 2255 - passing over start of BW

135 0000 - seisnet back on but not being  
used to write DDS files

(70)

135

0359:55

last shot  
3635

last file  
64027

for land shot pause

135

0403:21

~~4th~~ 1st shot 3645

1st file 64028

after land shot pause

135

04:29:30

2 shot 3720

file 64103

before

~~after~~ land shot pause.

04:33:05

1 shot 3731

1 file 6417

after land shot pause

135

1203

down to 1 gun  
due to MMO ~~power~~ down

(gun 5 left on)

shot #4991 file #65377

135

1205

3.5 KHz turned down

by dale

(71)

135 1215 MMO's report that dolphins are almost out of the safety zone

135 1219 MMO's report that dolphins are close to leaving the safety radius meaning that we will be able to begin ramp up soon

135 1223 Escalona was informed by MMO's that ramp up may begin

135 1224 2 guns in the water as ramp up begins  
shot #5053 file #65426

135 1229 4 guns back in the water  
(ramp up continues - 1, 9, 5, 20 back on)

135 1234 8 guns back in the water  
(ramp up continues - 1, 3, 8, 9, 10, 11, 12, 20 back on)

135 1239 14 guns in the water  
(ramp up continues - 1, 2, 3, 4, 5, 9, 10, 11, 12, 14, 17, 18, 19, 20 back on)



(72)

135 1243 18 guns back on  
(ramp up continues)

135 1247 20 guns back on  
- ramp up is complete

135 ~~16:19~~ 16:19 3min pause for land blast  
Shot 5745 / 66118  
16:22:03 5754 / 66119

135 17:48 Dolphins spotted outside radius  
3km headed toward us

135 18:09 Ramp Down 6072 Shot#

135 18:22 Starting Ramp up Shot 6100

Guns 5, 9, 1, 20,

1831 3, 10-12

18:34 2, 4, 14, 17-19

1837 XBT Probe launch

1840 All Guns except 8 & 13

18:46 All Guns in



135 <sup>2201</sup> ~~2401~~ End of line B0 L-19.

Shooting every 60 sec turning  
turn to line 20.

135 2323 - Start line B0/20 - shot 35/6800  
2348 - Gun 9-12 out

136 2400 - ALL GUNS ON.

0815 - CHANGE COURSE (Fishing boat in the Area)

136 0820 - GUNS 9-12 OUT.

0850 - GUNS 11 and 12 back ON

0904 - GUN 8 OUT

0925 - RETURN COURSE 345. - Tail buoy still 1 Km  
east of line

0948 - All 20 Guns in firing

1026 - Tail buoy drifting approx 1000m West of line

136 1421 - S.I.I. reports the presence of  
a dead baleen whale near their  
position - whale appears to have  
been dead for a long time

136 <sup>22</sup> 14~~20~~ Gun 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

(74)

136 1435 - due to SJII whale sighting  
number of guns brought down  
to 1 (gun 5 left in)

136 1442 35 kHz turned off

136 1447 due to whale sighting - ~~the~~  
Mari ordered a shut down  
of all the guns

136 1835 Ewing is turning back to east to  
examine whale carcass. There is an  
uncertainty about whether the whale is a  
Bottus whale or an endangered humpback whale.  
We will examine the carcass the verify the species

136 1840 Captain called to say that the whale was  
confirmed not to be a humpback. so that it is not  
necessary to turn the boat around to go back and  
examine the carcass. So we are resuming the  
planned ship track to the west. Captain thinks we  
to resume shooting could be in a few hours

(75)

1844 Mari confirmed that the whale was not a humpback. This was determined by counting the "folds" on the whale's throat as suggested by Alexander Sargeant. These folds were counted to see that the whale was a Burtus.

1853 Mate called to say we are merging gradually with the line. There is no rush to get back to the line since the captain has suggested that it could be several hours before we can resume shooting.

136-2230

All work stopped - Waiting on Releases from NSF / LDEO / Natl Fisheries  
Watch postponed until shooting resumes - possibly by Monday/Tues.

2243 PAM recovered

Guns up - Booms recovered

137 2027- Turning to Cse 137 -

(76)

138.0547 Starting Hydro sweep survey at "WP 4"

138 1853 - Ended Hydro sweep survey to turn south to waypoint where we hope to deploy streamer in the area to the west of Blanquilla Island. We have approval from NMFS that the whale carcass was not ~~lost~~ as a result of the Emergency aerugin operations and we anticipate approval from CDEO to resume aerugin work. Our plan is to be on the start point when this approval from CDEO comes through.

2246 One gun in the water shooting.

2304 2 guns on in water

139 0116 4 guns in the water as ramp up begins

139 0118 8 guns in the water ramp up cont.

139 0126 12 guns in the water ramp up cont.

(77)

134 0138 MMO's report being finished  
with ramp up observations

131 0143 16 guns in the water

131 0145 Paul requested a 6 km run in and  
a speed of 4.5 from the bridge

137 0156 17 guns in the water

139 0200 18 guns in the water

139 0446 Mario communicated with fishy vessel very close to

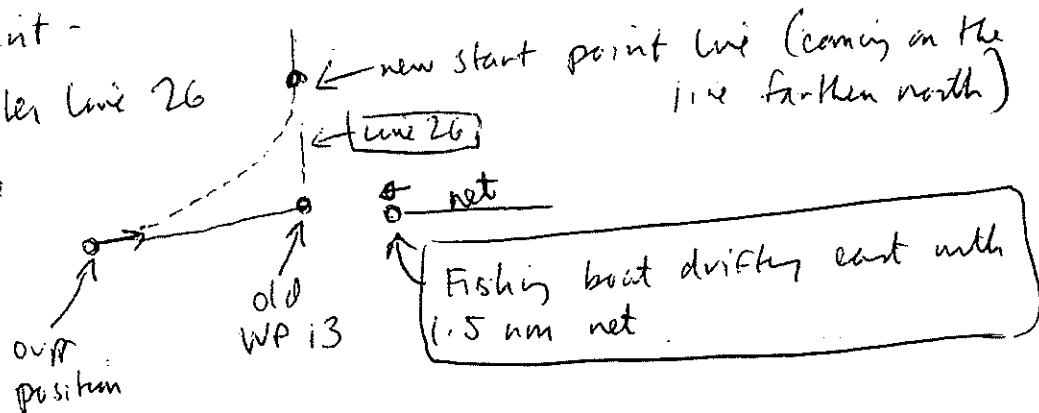
our turn point -

we will enter Line 26

to avoid the

fishy

vessel.



139 0527 Starting turn into Line 26

139 0536 Mari found out by email from the Seward Johnson

in Trinidad that there has been another stranding of a *Brubus*  
whale near Port of Spain. The whale is being examined at a

vet's office. She has gone to wake up Alejandro S. to see if

he has contacts in the stranding network in Trinidad.

13905 SOL 26 - Starting Line.

(78)

1390546 Mari woke up Alexander<sup>Sr</sup> to get his opinion about the stranding near Port of Spain, Trinidad. The distance from where we are to Trinidad is 220 nm.

1390551 Alexander S. - whale can swim 10-12 kts. - The whale would have traveled 4-6 days. If we harried the whale, it would be beaching itself later in this week. Alexander S. thinks that this is an isolated event unrelated to the Ewing. Alexander does not have contacts in Port of Spain.

13906 Woke up Captain Mark to tell him of stranding on Trinidad. He said he needs to "get everything on paper now".

1390615 Ted informed also. Captain took email describing event and left - presumably to call Seward Johnson.

Lundgren at EDER found information was on internet:

1390630 Capt. Mark. Whale was stranded - got off beach stranded again. Mark said that Lundgren<sup>(LDED)</sup> said that "there was no need for us to modify our operations". Lundgren is going to make "one more phone call" to confirm we can keep shooting.

(79)

139 0637 → Seisnet crashed at shot 0169.

Screen turned black + would not display when mouse was moved.

MCS Tape # 39 (RMT #1) has shots 170-179, where rmt # 2 does not. We were unable to stop the lcl guns quickly enough. Started writing segy files (with the JBR FP samples this time) on reel # 567. The BDL26.3 segy

1390716 Narrow miss between the Ewing and a Venezuelan fishing boat. The boat crossed our streamer at least once despite the bunch firing off three flares. The radio message had to pass through two other fishing boats in order to finally reach the culprit.

139 2023 - Line Bot to Tail Buoy approx 1 km west of line

2024 - Gun 6 out of water

2146 - Gun 6 Back in water



(80)

140 0456 Richard has found data at the beginning of line 27 is not being written to tape.

140 0458 Stopping line 27 because data is not being recorded. Richard, Ted, working on problem.

140 0506 passed OBS 301 - we are still not recording data. Shots are incrementing in syntrack but not being written to tape.

140 0510 Problem has still not been solved. All are baffled. (Richard, Ted, Dietmar, Karl)

140 0524 Shutting down entire Syntron system.

Shot timer still recorded in both LOBO system and Stephen's independent system.

140 0529 Turning Sersnet back on to examine the power supply.

140 0629 Richard thinks that he precipitated this problem by taking Sersnet out of the loop to test. Now the recording system does not recognize the tape drives. He has never seen this problem before.

140 08:49 We have shooting on cycle every 60 sec (OBS shooting) since the beginning of the line probably ~ 5 shots recorded.

See  
Cruise report for explanation  
of what happened ROZ

(81)

LEFT TOP 4

LEFT BOTTOM 0 new

~~TOP~~ CENTER TOP 4

CENTER BOTTOM 2

} TAPE ABOVE

140 0918 — ~~shot~~ <sup>shot</sup> 610 file 13100 ~~21~~

13-04 522 - 64 14266

Bot 27 - Tape 610 - file 13100

shot #230

9:20 - Gun 11 out of water

→ to reset RC Display

9:25 Missed shot #233, by #234 back to

tape on reel #611, file 13100 ROZ

9:33 Gun 11 Back on

140 0954 - Whales Crossing Bow

0956 - Ramp down to 1 Gun - shot 258/13224

10:24 - Ramp up in 5 min.

10:31 - Beginning Ramp up - shot 286/13252

11:01 - Ramp up Complete All guns - shot 310/13276

(82)

140 1147 - Ramp down to 1 gun - dolphins -  
Shot 349 / 13315

140 1210 - gun shop notified that ramp  
up can begin

140 1212 - gun 20 back on - ramp up  
begins - 2 guns in the water

140 1218 - gun 1 & 9 back on - ramp up cont.  
4 guns in the water

140 1220 - gun 10, 11, 12 back on - ramp up cont.  
7 guns in the water

140 1221 - gun 3 back on - ramp up cont.  
8 guns in the water

140 1226 gun 2, 4, 14, 18, 19 back on - ramp up cont.  
13 guns in the water

140 1227 gun 17 back on - ramp up cont.  
14 guns in the water

(83)



140 1230 guns 5, 6 back on, ramp up cont., 16  
guns total

140 1232 guns 6, 7 back on, ramp up cont., 18  
guns total

140 1236 guns 8, 13 back on,  
ramp up complete all 20 guns  
in the water

140 23:31 Gun # 6 shooting but not showing  
in the PC screen.

23:33 PC 6 gun # 6 maxed.

140 0000 speed through the water increased  
by approx. 1 knot to increase the  
speed made good.

140 035924 shot # 1105 file # 14070  
last shot fired far in approx  
3 min wait for land shot

LAND  
SHOT # 1  
64W

1401 040349 shot # 1109 file # 14078  
first shot fired after  
quiet period for land  
shot

141 042058 shot # 1132  
last shot prior to land shot #2  
on 64W

141 043313 shot # 1136  
first shot after quiet period.

141 0503 Alan called to say that the 12<sup>00</sup>  
and 1<sup>00</sup>pm were successful. He called too late  
so we had already stopped for 3 minutes  
from 12:59 to 1:03am.

141 1037 line BOL-27  
Missed 3 shots 1489-1490-1491

(85)

BOL 27 was engaged in a series of operations in the bridge and was in Spec Ops. We realized this just by margin 2

Fixing way points of line BOL-27

In the way ~~to solve~~ <sup>to solve</sup> ~~the problem~~ <sup>solving the problem</sup>

conducted about 1989 to 1991... and

have a whole series of data from BOL-26 SP#384

related to the line of ~~operation~~ <sup>operation</sup> (see below)

that site does not belong to  
of line

1056 Guns 11 and 12 turn off

1130 Guns 11 and 12 back on.

1138 - Maggie off line & being recovered - Water depth

141 124 - notified of MM powerdown

11 guns taken out

1 gun still in - gun 5

141 1228 - ~~was~~ notified by MMO's that ramp up  
should begin in ~15 min

141 1246 - notified by MMO that ramp up may  
begin

141 1248 - 2 guns in the water - ramp up  
beginning

(86)

141 1250 4 guns in the water, ramp up  
cont.

141 1254 8 guns in the water, ramp up cont.

141 1301 back to 1 gun due to presence  
of whale inside safety radius

141 1308 notified by MMOs that whale had  
not been sighted for 3 min and  
that ramp up may begin at  
1335 if nothing else changes

141 1334 notified by MMOs that whale was  
sighted again (last sighting at  
1326) - ramp up may begin at  
1356 at the earliest

141 1355 MMOs have just sighted the whale  
inside the safety radius - they have told  
us that if they observe the  
whale moving outside the radius they  
will notify us - otherwise we can begin ramp up at 1405

(87)

1411358 whale observed to have moved outside  
~~the~~ safety radius - ramp up may begin

1411359 gun 20 back on - ramp up begins

1411406 notified that whale was seen inside  
the <sup>safety</sup> radius again - powerdown until  
~~at least~~ at least 1436

1420 Whale moving parallel to ships course.  
~~The~~ Breaching repeatedly.

1441 Whale moving closer to ship

1444 Talk ordered that ships course be  
modified to move about a mile  
further E from Los Frailes Is.

The goal is to move away from the whale.  
Begin pulling gun for turn.

1454 Whale is still to the west of us - inside  
safety radius

1500 Beginning turn to Port to move 1nm to



88

1507 Begin Ramp-up, WLC on bridge  
of Safety, Vadins

141 1508 ramp up begins - 2 guns back on

141 1516 3 guns back on

141 1521 4 guns back on

141 1522 7 guns back on

141 1523 8 guns back on

141 1527 10 guns back on

141 1529 13 guns back on

141 1537 16 guns back on

141 1541 17 guns back on

141 1543 18 guns back on



(90)

141 1929 Turn off guns for 4 minutes to reload  
last shot 1929-1933 GMT outage of guns  
last shot 1999, first shot was 2004.

141 1939 Turn off guns for 4 minutes to reload  
last shot. 1939-1943 GMT outage of guns.

Exact turnoff time 1937 + 17 seconds to allow last shot.

Last shot ~~1930~~ 1999 ~~2004~~ and first one was 2004  
2009 2013

141 2029 GUNS # 11 and 12 turned off.

141 2120 End of line 27.

141 2122 Start of line 28.  
Streamer ~~is~~ is still turning  
first shots 56

141 2132 Shot 86 / 15029 - Stopping to  
Reboot Seisnet 1045830 / 6337736

2133 - All guns on line

2144 - <sup>Start</sup> Line 28A - 1046752 / 6337776

Topo 630 / Shot 123 / 15100

(91)

21:47 Missed shots 128-133. to confirm  
QC Display on line BOL28A Sht 134  
is the last first shot.

141 22:46. Recording system crashed again  
Reverted shots are on tape 631, after  
that we do not know.

Line 28A

System people working on problem.  
Planning to turn around to recover  
the last shots

22:58 Starting to turn and start  
line 28A again ~ 2 hours to do so.

Summary:

- We are going to go back and  
start shooting over line 28A at ~10°48' lat.

- Last shot point recorded before problem  
# 281

- Tapes containing BOL-28 info

# 631

# 632

7736

(92)

142 0136 seisnet crashed - reverted to  
pulling segy files from the 3990s

142 0322 due to a compressor failure  
approx 4 shots were  
lost (alternating shots)  
~~shots~~ starting at ~ shot # 552  
~ file # 15884 - shots that  
did occur had a pressure  
of 1600-1800

142 0331 fishing boat anchored in path  
of the Ewing, plan to turn  
1 nm to the west to avoid  
the boat

142 0338 decision was made to deviate  
~ 0.5 mi to the east of  
the track to avoid the fishing  
boat

(93)

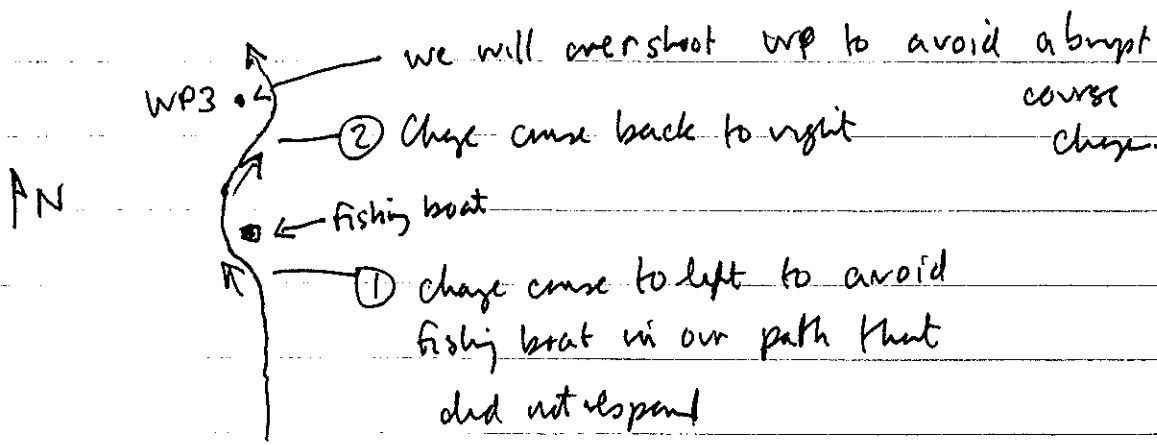
142 0405 Captain called to say that ship will move slightly back to east in the direction of the original line in order to get the tail buoy past the fishing boats.

142 0549 - Starting to turn on line 28B due to multiple fishing boats in our way.

142 0613 Starting To turn on Line 28B due to multiple fishing boats in our way.

142 0620 We contact Anthony and Richard - captain worried about tail buoy running into nearby fishing vessel.

142 0642 Multiple contacts with fishing vessels has resulted in course changes determined by bridge for safety reasons.



(94)

142 0658 We are about to make turn onto more northwesterly part of line - Spectra shots are programmed to continue without a line number change.

142 0708 In the turn we thought that the guns were not firing and went to cycle shooting. The problem is that in the turn the time between shots had gotten longer <sup>at the turn</sup>, so Spectra was still working and going to cycle was not necessary. During this interval of about 2 minutes we had double shots since both the Spectra and extend cycle were giving shot commands.

- 1202 was missed (very off the line)
- 1203 - 1206 were double shots