

EW0005

RESEARCH VESSEL MAURICE EWING

CRUISE ~~E-12005~~

SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
148	0000	2144	280	9.3	1875	09 34.491 N	085 37.372	Begin Watches
148	0030	72.73	276.1	11.1	1594.3	09 35.431 N	085 42.304 W	—
148	0100	78.18	276.6	10.7	1793.3	09 36.458 N	085 47.686 W	—
148	0130	83.73	277.3	11.4	2124.2	09 37.498 N	085 53.176 W	—
148	0200	89.39	274.9	10.4	2999.2	09 38.610 N	085 59.026 W	—
148	0230	94.64	275.3	11.2	3269.1	09 39.660 N	085 04.563 W	—
148	0300	100.38	274.3	11.2	3946.1	09 40.754 N	086 10.301 W	—
148	0330	106.05	272.1	10.1	4403.0	09 41.809 N	086 15.991 W	—
148	0345	—	—	—	—	—	—	03:46:07 OBH released
148	0400	107.13	241.0	0.21	4305.	09 42.211 N	086 16.822 W	Test over the side
148	0430	107.38	128.7	0.41	4338.0	09 42.599 N	086 16.730 W	Stationary CWPT SWEEP 1 for test
148	0500	107.55	151.8	0.31	4342.0	09 42.809 N	086 16.747 W	" " " "
148	0530	107.93	177.5	1.11	4342.0	09 42.807 N	086 16.640 W	
148	0543	—	—	—	—	09 42.769 N	086 16.639 W	05:43:50 OBH return
148	0600	108.30	93.6	0.31	4342.0	09 42.831 N	086 16.655 W	Test over the side
								0600 setting up next test
148	0616	108.51	187.2	0.61	4342.0	09 42.847 N	086 16.613 W	06:16:48 OBH release test
148	0630	108.65	197.0	0.51	4342.0	09 42.873 N	086 16.658 W	over the side
148	0700	108.86	209.7	0.21	4342.0	09 43.115 N	086 16.794 W	
148	0730	109.10	194.4	0.31	4342.0	09 43.371 N	086 16.814 W	
148	0746	109.22	221.1	0.61	4342.0	09 43.460 N	086 16.821 W	07:46:04 OBH returned to deck
148	0800	109.33	196.1	0.11	4342.0	09 43.555 N	086 16.860 W	
148	0803							3.5H ² on
148	0816	111.36	215.0	11.2	4297.0	09 41.942 N	086 16.803 W	08:03:30 beginning underway
148	0830	113.56	337.1	10.7	4094.0	09 42.327 N	086 18.714 W	will start hydroswep at 1 st pt of track
								HYDROSWEEP RESUME
148	0830							Still maneuvering to start of line

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
148	0843	116.10	319.4	11.7	4181.0	09 44.896 N	086 19.181 W	08:43:35 underway on 1 st line
148	0900	119.23	318.3	11.1	4354.0	09 47.553 N	086 21.302 W	
148	0930	124.74	317.5	11.2	4461.0	09 52.176 N	086 25.025 W	
148	1000	130.29	320.0	11.0	4560.0	09 56.884 N	086 28.829 W	
148	1030	135.82	323.1	11.0	4658.0	10 01.504 N	086 32.286 W	
148	1100	141.31	322.0	11.2	4824.0	10 06.413 N	086 35.715 W	
148	1130	146.92	321.0	11.3	4965.0	10 11.387 N	086 39.180 W	
148	1200	152.44	322.9	11.0	4895.0	10 16.486 N	086 42.748 W	New Watch: S. Gray, Jr.
148	1230	157.97	321.5	11.0	4828.0	10 21.479 N	086 46.226 W	
148	1300	163.56	321.6	11.2	4448.0	10 26.385 N	086 49.413 W	Still on Line 1
148	1330	168.71	321.5	11.2	4617.0	10 30.906 N	086 52.982 W	
148	1400	174.45	319.5	11.0	4727.0	10 36.010 N	086 56.883 W	
148	1430	180.10	320.3	11.2	4552.0	10 40.958 N	087 00.836 W	
148	1500	185.68	322.5	10.8	4757.0	10 45.900 N	087 04.679 W	
148	1510							Slowing for OBH test
148	1515	187.9	306	3.6	4685.0	10 47.942 N	087 06.301 W	
148	1530	188.13	045	0.6	4597	10 48.366 N	087 06.499 W	Preparing test
148	1600	188.47	059	0.6	4538	10 49.093 N	087 06.841 W	Completing test
148	1604		212	4.1		10 49.147	087 06.888 W	Starting new line 2
	1613	188.47	202	9.9	5262.9	10 46.016	087 08.968	
148	1630	192.78	223	10.8	5262.9	10 46.016	087 08.968 W	Maggie launched - being tuned
	1631							Maggie On
148	1700	198.04	223	10.6	4346	10 42.738 N	087 13.314 W	Mags Noisy - being tuned
148	1730	203.61	223	11.1	3713	10 39.374 N	087 17.768 W	Mag looks clean
148	1800	209.24	226.7	11.3	3543.1	10 35.862 N	087 22.432 W	New Watch Barrie
148	1830	214.64	129.5	10.5	3172.1	10 32.11 N	87 24.382 W	Course change 132 ~

Finish Course change 133 18:28

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
148	19:00	219.81	131.9	10.5	3170.1	10° 28.801 N	87° 20.904 W	—
148	19:30	225.10	129.8	10.5	3229.1	10° 25.431 N	87° 17.214 W	—
148	20:00	230.46	127.0	10.9	1932.3	10° 21.920 N	87° 13.453 W	—
148	20:30	235.86	129.7	10.8	3244.1	10° 18.602 N	87° 9.823 W	—
148	21:00	240.94	130.2	10.6	3300.1	10° 15.216 N	87° 6.153 W	—
148	21:30	246.30	132.1	11.0	3191.1	10° 11.826 N	87° 02.447 W	—
148	22:00	251.74	130.5	10.9	3383.1	10° 08.218 N	86° 58.563 W	—
148	22:30	257.30	131.4	11.7	3467.1	10° 04.645 N	86° 54.692 W	—
148	23:00	262.82	128.7	11.0	3502.1	10° 01.223 N	086° 50.963 W	Hydrosweep Problems?
148	23:30	268.31	129.5	10.5	3552.1	9° 57.789 N	086° 47.255 W	—
149	00:00	273.69	130.9	10.6	3537.1	9° 54.413 N	086° 43.591 W	Hydrosweep restarted @ 00:08:50 GMT
149	00:30	279.11	130.8	10.8	3515.1	09° 50.924 N	086° 39.814 W	—
149	01:00	284.50	132.8	10.8	3569.1	09° 47.439 N	086° 36.024 W	—
149	01:30	289.86	118.7	10.6	3520.3	09° 44.060 N	086° 32.252 W	Begin course change @ 01:25 - new CSE
149	02:00	295.42	309.1	11.3	3745.1	09° 47.866 N	086° 33.044 W	C 01:55 = 1002 303°
149	02:30	300.94	308.0	10.9	∅	09° 51.872 N	086° 37.384 W	- mag HS problem, restarted + turned off @ 02:124
149	03:00	306.57	309.0	11.3	∅	09° 56.001 N	086° 41.864 W	↳ Hydrosweep still off @ 02:30
149	03:30	312.18	306.3	11.6	3630.1	10° 00.103 N	086° 46.267 W	↳ back on at 02:36
149	04:00	317.26	312.4	9.30	3620.1	10° 03.874 N	086° 50.347 W	HS problems 02:57
149	04:30	322.36	309.0	9.11	3650.1	10° 07.566 N	086° 54.359 W	back on at 03:25
149	05:00	327.02	310.1	9.40	3403.1	10° 10.973 N	086° 57.987 W	
149	05:30	331.66	306.3	9.30	3551.2	10° 14.396 N	087° 01.722 W	
149	06:00	336.29	305.5	9.50	3522.1	10° 17.791 N	087° 05.387 W	
149	06:30	340.87	306.1	9.40	3452.1	10° 21.144 N	087° 08.976 W	
149	07:00	345.56	308.7	9.30	3006.1	10° 24.609 N	087° 12.687 W	
149	07:30	350.22	309.5	9.10	3471.1	10° 28.071 N	087° 16.454 W	

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149	0800	354.76	315.8	8.8	3424.1	10. 31.456 N	087 20.119 W	
149	0830	359.44	13.1	9.30	3444.1	10 35.074 N	087 23.171 W	08:23 starting turn, next leg
149	0900	364.44	130.9	9.71	3584.1	10 34.207 N	087 19.370 W	08:48 finishing turn, max speed
149	0930	369.67	131.0	11.0	3742.1	10 30.847 N	087 15.750 W	
149	1000	374.90	130.0	10.0	3679.1	10 27.516 N	087 12.168 W	
149	1030	379.85	125.3	9.16	3516.1	10 24.249 N	087 08.636 W	
149	1100	383.08	131.8	10.4	3611.1	10 20.867 N	087 05.030 W	
149	1130	390.43	129.0	10.5	3660.1	10 17.463 N	087 01.354 W	
149	1200	395.64	131.2	10.7	3617.1	10 14.159 N	086° 57' 81 W	
149	1230	401.12	132.5	10.7	3734.1	10 10.165 N	086° 54' 08 W	
149	1300	406.2	131.4	10.8	3806	10° 07.262 N	086° 50.406 W	
149	1330	411.6	135.3	10.5	3844	10° 03.845	086° 46.753	
149	1400	416.94	130.5	10.4	3913.1	10° 00.526 N	086° 43.174 W	
149	1430	422.20	133.4	10.2	3892	09° 57.072 N	086° 39.505 W	
149	1435							Turning to WP 12
149	1444		325	10.9	3978	10° 00.446 N	086° 39.803 W	On Cse to WP 12
149	1500	427.4	325	10.9	3978	10° 00.446 N	086° 39.803 W	
149	1530	432.15	311.2	8.50	4243.0	10° 00.702 N	086° 42.709 W	
149	1544		306.2	9.2				Passed WP 12
149	1600	436.57	307.7	9.40	4494.2	10° 08.114 N	086° 46.139 W	
149	1630	441.53	308.7	9.30	5054.2	10° 11.641 N	086° 52.135 W	
149	1700	446.26	312.3	8.22	3747.2	12° 14.986 N	086° 53' 527 W	
149	1730	450.46	308.2	8.71	3873.1	10° 18.410 N	086° 57' 556 W	
149	18:00	455.03	307.8	9.11	4052	10° 21.833 N	087 01.250 W	New watch
149	18:30	459.43	309.4	8.61	3732.1	10° 25.122 N	87° 04.820 W	
149	18:40	461.53	323.48.66		3869.1	10° 26.727 N	87° 06.540 W	Breaking off line + going other way Sweep 20

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
149	19:00	463.51	87.5	7.51	4122.0	10° 28.183 N	087° 05.590 W	-
149	19:04	464.19	121.9	9.90	4130	10° 27.936 N	087° 05.024 W	on course sample 21
149	19:30	468.46	124.2	10.4	4121	10° 26.089 N	087° 01.542 W	passing W.P. 20
149	20:00	473.35	130.6	10.2	4200	10° 23.101 N	086° 58.073 W	
149	20:30	478.65	220.3	10.8	3973.1	10° 19.493 N	086° 58.220 W	-
149	21:00	484.27	180.7	10.8	3617.1	10° 14.472 N	086° 59.344 W	
149	21:30	489.16	194.	5.41	3214.1	10° 09.785 N	087° 00.691 W	Maggie off 21:24:48
149	22:00	491.52	55.8	5.01	3233.1	10° 08.630 N	087° 00.172 W	
149	22:33:30	493.45	36.1	0.11	3320.1	10° 09.679 N	086° 58.751 W	OBH 1 Launched
149	22:30	493.53	36.1	2.3	3368.1	10° 09.764 N	086° 58.782 W	-
149	23:00	498.31	41.5	10.6	3667.1	10° 13.540 N	086° 55.579 W	-
149	23:30	503.62	52.2	10.9	34139	10° 17.303 N	086° 51.674 W	
149	23:56:37	506.98		0.5	4567	10° 19.269 N	086° 49.061 W	OBH 2 Launched
150	00:00	506.99	102.4	0.4	4567	10° 19.313 N	086° 49.078 W	
150	00:30	511.58	47.2	10.4	4548.0	10° 22.648 N	086° 45.572 W	
150	00:48:57			0.70	4242.0	10° 23.468 N	086° 44.793 W	OBH 3 launched
150	01:00	515.04	47.2	10.5	3931.1	10° 25.111 N	086° 43.074 W	
150	01:17:46	517.02	2.10	2.0	3741.1	10° 26.531 N	086° 41.690 W	OBH 4 launched
150	01:30	518.39	50.4	10.8	3487.0	10° 27.651 N	086° 40.534 W	
150	02:00	522.55	59.4	2.52	2158.2	10° 30.644 N	086° 37.506 W	
150	02:04:02	522.71	49.2	0.92	2141.2	10° 30.768 N	086° 37.419 W	OBH 5 launched
150	02:30	526.33	49.7	5.02	1702.2	10° 33.442 N	086° 34.707 W	
150	02:38	526.83	57.2	1.02	1639.3	10° 33.854 N	086° 34.310 W	OBH 6 launched
150	03:00	529.95	48.0	10.7	1057.3	10° 36.137 N	086° 32.935 W	
150	03:16	531.98	74.2	1.9	823.4	10° 37.657 N	086° 30.425 W	OBH 7 launched
150	03:30	533.96	43.3	10.7	529.3	10° 39.077 N	086° 29.982 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
150	03:53	537.18	39.3	2.4	263.6	10° 41.47N	086° 26.565 W	OBH 8 launched
150	04:00	537.91	42.0	11.3	239.1	10° 41.892 N	086° 26.076 W	GPS time shot troubles
150	04:30	543.	41.0	8.20	206.5	10° 45.066	086° 22.090	Datum " " "
150	04:40	544.14	33.1	1.90	206.7	10° 46.445 N	086° 21.511 W	OBH 9 launched
150	05:00	547.16	46.3	10.7	202.7	10° 48.699 N	086° 19.212 W	—
150	05:28	551.11		130	198.5	10° 51.420 N	086° 16.473 W	OBH 10 launched
150	05:30	551.25	38.0	4.1	199.0	10° 51.458	086° 16.429	
150	06:00	556.07	41.9	10.8	176.1	10 55.022 N	086 12.805 W	new watch
150	06:19	558.09	18.9	1.0	164.5	10 56.399 N	086 11.410 W	OBH 11 launched
150	06:30	559.37	42.9	10.7	156.3	10 57.354 N	086 10.431 W	
150	07:00	564.59	38.8	4.9	125.1	11 01.054 N	086 06.670 W	
150	07:09	565.09	36.3	1.4	121.9	11 01.384 N	086 06.344 W	OBH 12 launched
150	07:30	568.09	41.3	10.9	108.9	11 03.559 N	086 04.105 W	
150	08:00	572.04	51.2	1.51	97.1	11 06.350 N	086 01.273 W	08:00:36 OBH 13 launched
150	08:00:36	572.07	57.1	1.11	96.5	11 06.358 N	086 01.260 W	" " " " "
150	08:30	576.74	43.9	10.8	79.3	11 09.737 N	085 57.806 W	
150	08:49	579.03	61.6	1.20	69.8	11 11.315 N	085 56.202 W	OBH 14 launched
150	09:00	580.10	222.6	10.8	73.3	11 10.612 N	085 56.938 W	
150	09:30	584.33	303.0	1.80	89.4	11 08.067 N	085 57.987 W	0940 working on streamer, ^{cable} 200 ft off
150	10:00	586.52	307.5	4.30	90.9	11 09.603 N	086 01.679 W	SEEN BIRDS AT 50 m
150	10:30	588.75	310.0	4.60	90.6	11 11.124 N	086 03.379 W	
150	11:00	591.11	311.6	4.60	92.6	11 12.701 N	086 05.207 W	BIRD #9 in
150	11:30	592.96	308.4	3.60	89.8	11 13.900 N	086 06.699 W	
150	12:00	594.69	311.6	3.30	91.3	11° 14.969 N	086° 07.996 W	Bird #14 in
150	12:30	596.42	307.9	3.50	89.1	11° 16.022 N	086° 09.381 W	Bird #5 and 16 in
		598.15	308.0	3.5	85.5	11° 17.229 N	086° 10.773 W	BIRD #17 in. Bird #18 in

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
150	1330	599.88	304	3.5	82.3	11° 18.314° N	86° 12.176° W	Bird #19, Bird #20 Bird #21
150	14:00	601.52	212.1	3.30	83.9	11° 18.634° N	86° 13' 496 W	
150	1430	603.23	132	3.4	92.2	11° 17.233° N	86° 12.978° W	Bird 22 out Bird #23
150	15:00	604.73	134.4	2.40	95.5	11° 16.136° N	86° 11.865 W	
150	15:30	606.28	132.4	3.20	97.0	11° 15.084° N	086° 10.749 W	
150	16:00	607.73	136.6	2.90	98.2	11° 13.929° N	086° 09.726 W	
150	16:30	609.22	135.4	3.10	98.3	11° 12.759° N	086° 08.700 W	
150	1700	611.02	127.1	3.7	99.11	11° 11.527° N	086° 07.338 W	Putting out guns - heading to line
150	17:30	612.98	131.4	4.10	100.4	11° 10.194° N	086° 05.860 W	
150	18:00	615.02	53.3	4.30	98.8	11° 09.418° N	086° 04.063 W	—
150	18:30	617.33	65.3	4.40	88.6	11° 10.652° N	086° 03.063 W	- Testing 18:47:
150	19:00	619.57	65.8	4.60	81.9	11° 11.549° N	085° 59.938 W	- changing out Streamer-section
150	19:30	621.4	63.1	2.86	73.2	11° 12.147° N	085° 58.354 W	
150	20:00	622.59	45.7	2.66	67.2	11° 12.895° N	085° 57.200 W	14:22 Local 20:22 GRT START TURN 20:23 Starting Turn
150	20:30	624.42	90.5	4.30	59.8	11° 13.814° N	085° 55.564 W	
150	21:00	624.57	231.7	4.00	64.2	11° 12.220° N	085° 55.083 W	Ending Testing
150	21:30	628.61	218.9	4.00	71.9	11° 10.881° N	085° 56.656 W	— 21:40 Start Shooting
150	22:00	630.51	220	3.80	81.2	11° 09.536° N	085° 58.017 W	— ch# 10, 28, 49, 70, 130, 154, 30 seem busy
150	22:30	632.35	217.5	3.80	88.2	11° 08.192° N	085° 59.390 W	—
150	23:00	634.28	224.0	4.10	95.3	11° 06.854° N	086° 00.741 W	missed shot, started again at 2 23:00:39 # Shot 84 } missed
150	23:30	636.17	225.9	3.80	100.8	11° 05.465° N	086° 02.144 W	missed a shot again 23:02:48 # Shot 86 } 5 shots
150	23:32:13	636.41	223.6	3.90	102.2	11° 05.357° N	086° 02.264 W	Switching to Time 1/3
150	24:00	638.13	223	3.70	107.3	11° 04.042° N	086° 03.606 W	
151	00:30	640.16	224.4	4.00	112.0	11° 02.641° N	086° 04.017° W	
151	01:00	642.10	225.0	3.90	122.4	11° 01.164° N	086° 06.523 W	
151	01:30	644.02	221.5	3.80	135.0	10° 59.813° N	086° 07.879 W	

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151	02:00	646.06	221.6	3.9	146.7	10° 58.381 N	086° 09.343 W	
151	02:30	648.03	222.9	3.6	160.9	10° 56.951 N	086° 10.782 W	
151	03:00	650.00	224.5	3.8	171.7	10° 55.529 N	086° 12.216 W	
151	03:30	651.96	219.1	4.1	183.2	10° 54.119 N	086° 13.650 W	
151	04:00	653.91	222.4	3.9	192.6	10° 52.724 N	086° 15.069 W	
151	04:30	655.89	222.8	3.6	199.0	10° 51.305 N	086° 16.525 W	
151	05:00	657.88	220.4	3.9	204.9	10° 49.872 N	086° 17.970 W	
151	05:30	659.86	222.8	4.3	203.9	10° 48.396 N	086° 19.462 W	
151	06:00	661.81	222.6	3.80	204.7	10° 47.005 N	086° 20.876 W	
151	06:30	663.75	220.6	4.30	205.6	10° 45.599 N	086° 22.286 W	
151	07:00	665.70	225.8	4.30	198.5	10° 44.198 N	086° 23.715 W	
151	07:30	667.76	221.7	4.10	218.3	10° 42.715 N	086° 25.223 W	
151	08:00	669.77	225.9	4.10	279.6	10° 41.277 N	086° 26.677 W	
151	08:30	671.81	213.8	4.10	442.2	10° 39.860 N	086° 28.115 W	
151	09:00	673.97	216.6	3.70	633.3	10° 38.437 N	086° 29.554 W	
151	09:30	675.97	213.1	4.10	934.4	10° 36.989 N	086° 31.026 W	
151	10:00	677.93	213.3	3.80	1241.3	10° 35.557 N	086° 32.482 W	
151	10:30	679.89	211.3	4.20	1570.3	10° 34.138 N	086° 33.915 W	
151	11:00	681.93	216.7	3.90	1836.3	10° 32.710 N	086° 35.370 W	
151	11:30	683.96	205.7	4.30	2051.2	10° 31.263 N	086° 36.827 W	
151	12:00	686.4	207.7	4.10	2488.2	10° 29.793 N	086° 38.303 W	
151	12:30	688.20	208.2	4.40	3309.2	10° 28.359 N	086° 39.750 W	
151	13:00	690.34	205.7	4.10	3656.2	10° 26.873 N	086° 41.268 W	
151	13:30	692.44	210.7	4.50	3873.1	10° 25.397 N	086° 42.762 W	
151	14:00	694.52	215.7	4.20	4177.0	22° 985 N	44.194 W	
151	14:30	696.6	211.2	4.0	4560	10° 22.524 N	086° 45.675 W	

RESEARCH VESSEL MAURICE EWING

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SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
151	1500	698.66	209.6	4.00	5071.9	10° 21.117 N	086° 47.089 W	
151	1530	700.66	213.5	4.30	4712.0	10° 19.739 N	086° 48.490 W	
151	1600	702.78	212.2	3.50	4368.0	10° 18.260 N	086° 49.787 W	
151	1630	704.81	212.3	4.20	4149.0	10° 16.859 N	086° 51.419 W	1627: 3.5 KHz off - End of roll
151	1700	706.82	216.2	4.20	4065.0	10° 15.439 N	086° 52.846 W	1712 - New 3.5 KHz Roll
151	1730	708.84	212.6	4.20	3771.1	10° 14.061 N	086° 54.239 W	
151	1800	710.85	218.9	4.30	3657	10° 12.632 N	086° 55.688 W	New Watch
151	1830	713.01	212.7	3.90	3554.1	10° 11.147 N	086° 57.191 W	—
151	19:00	715.00	214.9	4.30	3368.1	10° 09.717 N	086° 58.644 W	—
151	19:30	717.10	219.0	4.40	3236.1	10° 08.206 N	087° 00.066 W	—
151	20:00	719.17	213.9	4.20	3189.1	10° 06.885 N	087° 01.506 W	—
151	20:30	721.23	214.1	4.10	3158.1	10° 05.487 N	087° 02.916 W	—
151	21:00	723.36	216.7	4.40	3062.1	10° 04.052 N	087° 04.352 W	—
151	21:30	725.47	218.1	4.20	3092.1	10° 02.684 N	087° 05.753 W	—
151	22:00	727.41	218.8	3.80	3080.1	10° 01.341 N	087° 07.121 W	—
151	22:30	729.66	220.0	4.40	3080.1	10° 00.959 N	087° 08.628 W	—
151	23:00	731.63	221.2	4.40	3085.1	9° 58.535 N	087° 09.963 W	—
151	23:30	733.83	212.3	3.90	3114.1	9° 52.044 N	087° 11.461 W	—
151	23:40	734.57	216	4.2	3123	9° 56.586 N	087° 11.967 W	End of line NIC20H around 23:31 for 08H testing
152	00:00	735.91	216.4	4.10	3139.1	09° 55.662 N	087° 12.914 W	Testing equipment
152	00:30	738.02	219.3	4.00	3118.1	09° 54.247 N	087° 14.319 W	
152	01:00	740.11	216.2	4.30	3075.1	09° 52.842 N	087° 15.674 W	start turn @ - 01:15
152	01:30	742.40	293.7	4.20	2328.2	09° 52.502 N	087° 17.598 W	
152	02:00	744.64	147.0	4.60	3113.1	09° 51.407 N	087° 18.731 W	Finish turn @ - at 02:28
152	02:30	746.95	406	3.9	3090.1	09° 51.720 N	087° 16.864 W	
152	03:00	749.16	49.0	4.8	3098.1	09° 53.402 N	087° 15.129 W	02:43:50 start shooting.

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
152	03:30	751.36	42.8	4.40	3137.1	09° 55.161 N	087° 13.342 W	shooting MCS to line PIC 20
152	04:00	753.50	40.3	4.40	3115.1	09° 56.873 N	087° 11.617 W	Speed made good (SMG) = 4.8 for 1.5, 15 min.
152	04:06	754.02	—	—	3110.1	09° 57.269 N	087° 11.222 W	change to time for shot interval (20 sec)
152	04:30	755.71	38.0	4.70	3084.1	09° 58.556 N	087° 09.936 W	
152	05:00	757.92	45.4	4.50	3082.1	10° 00.287 N	087° 08.158 W	SMG = 4.9 (1 min), 4.8 (5 min), 4.8 (15 min)
152	05:30	760.21	38.3	5.00	3081.1	10° 01.971 N	087° 06.460 W	
152	06:00	762.61	40.6	4.70	3055.1	10 03.709 N	087 04.715 W	
152	06:30	764.97	46.6	4.60	3158.7	10 05.473 N	087 02.904 W	
152	07:00	767.23	47.7	4.70	3188.1	10 07.140 N	087 01.246 W	
152	07:30	769.59	46.4	4.80	3331.1	10 08.833 N	086 59.528 W	
152	08:00	772.00	42.0	5.00	3363.1	10 10.491 N	086 57.853 W	
152	08:30	774.50	40.2	5.20	3650.1	10 12.170 N	086 56.145 W	
152	09:00	776.94	48.8	4.80	3782.1	10 13.917 N	086 54.363 W	
152	09:30	779.34	46.3	4.80	3131.0	10 15.651 N	086 52.625 W	the bottom is not clear
152	10:00	781.74	50.9	4.90	4362.0	10 17.338 N	086 50.905 W	STORMIN' OUTSIDE
152	10:30	784.21	48.7	4.90	4582.0	10 19.082 N	086 49.153 W	
152	11:00	786.66	54.6	4.90	5080.9	10 20.794 N	086 47.407 W	heading into trench
152	11:30	789.21	51.3	5.00	4555.0	10 22.563 N	086 45.629 W	
152	12:00	791.75	53.7	5.0	4191.0	10 24.253 N	086 43.936 W	
152	12:30	794.18	53.0	5.0	3831.0	10 25.966 N	086 42.193 W	
152	13:00	796.59	53.4	4.60	3410.0	10 27.681 N	086 40.459 W	
152	13:30	798.94	49.0	4.30	2675.1	10 29.412 N	086 38.700 W	
152	14:00	801.27	46.1	4.40	2059.1	10 31.142 N	086 36.968 W	
152	14:30	803.6	52.7	4.80	1814.3	10 32.821 N	086 35.240 W	
152	15:00	806.01	57.6	4.90	1519.3	10 34.520 N	086 33.525 W	
152	15:30	808.41	51.5	4.60	1041.3	10 36.268 N	086 31.767 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
152	16:00	810.80	54.9	4.60	720.4	10° 38.237 N	086° 29.947 W	
152	16:30	813.15	54.8	4.60	450.4	10° 39.771 N	086° 28.1208 W	
152	17:00	815.46	40.3	4.80	262.4	10° 41.440 N	086° 26.513 W	
152	17:30	817.85	44.9	4.80	207.2	10° 43.168 N	086° 24.763 W	
152	18:00	820.04	43.1	4.9	202.5	10° 44.913 N	086° 22.975 W	
152	18:30	822.63	42.5	4.7	207.3	10° 46.641 N	086° 21.211 W	
152	18:41:20							18:41 ~ 2870 ^{sketch} missed compressor changed. 2876 ^{missed} w/resp
152	19:00	825.02	43.3	4.9	204.0	10° 48.362 N	86° 19.474	
152	19:30	827.46	43.8	4.8	206.3	10° 50.094 N	86° 17.718 W	-
152	20:00	829.93	41.9	4.8	196.3	10° 51.825 N	86° 15.911 W	-
152	20:30	832.40	38.9	4.80	186.2	10° 53.593 N	086° 14.177 W	-
152	21:00	834.70	39.4	4.80	174.6	10° 55.270 N	086° 12.478 W	-
152	21:30	837.14	43.2	4.9	158.1	10° 57.010 N	086° 10.713 W	-
152	22:00	839.63	39.8	4.7	143.8	10° 58.748 N	086° 08.952 W	-
152	22:30	841.91	42.2	4.80	127.0	11° 00.425 N	086° 07.239 W	-
152	23:00	844.21	40.6	4.90	116.1	11° 02.136 N	086° 05.517 W	-
152	23:30	846.70	42.0	4.90	108.0	11° 03.863 N	086° 03.250 W	- Gun #12 is out w/ ^{leak} A.F.
152	23:49	-	-	-	-	-	-	Gun #11 out & 12 in
153	00:00	849.13	41.2	4.70	100.9	11° 05.572	086° 02.003	-
153	00:15	-	-	-	-	-	-	Guns #11 + 12 back on
153	00:30	851.45	39.4	4.60	91.7	11° 07.189 N	086° 00.364 W	
153	01:00	853.81	39.0	4.40	84.5	11° 08.902 N	085° 58.644 W	
153	01:30	856.24	45.9	4.7	72.7	11° 10.632 N	085° 56.890 W	
153	01:53	858.08	-	-	66.4	11° 11.903 N	085° 55.568 W	Start turn - End line NIC 20
153	02:00	858.59	95.2	4.3	64.3	11° 12.087 N	085° 55.046 W	↳ begin line NIC 15

4 guns only

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LOX	REMARKS
153	02:12	859.53	148.7	4.80	64.2	11° 11.605 N	085° 54.283 W	finish turn to Line NK 15
153	02:30	860.88	139.4	4.70	63.5	11° 10.421 N	085° 53.482 W	—
153	03:00	863.32	138.2	4.6	65.8	11° 08.471 N	085° 52.049 W	
153	03:16	—	—	—	—	11° 07.354 N	085° 51.242 W	start turn for line 14 (87.700 000 000)
153	03:30	865.66	192.5	4.80	66.2	11° 06.371 N	085° 51.165 W	
153	03:37	866.24	219.6	4.00	69.0	11° 05.822 N	085° 51.496 W	END of turn - on Line 14
153	04:00	867.75	220.6	3.9	75.7	11° 04.778 N	085° 52.551 W	
153	04:30	869.79	220.1	4.00	83.2	11° 03.864 N	085° 54.020 W	
153	05:00	871.74	221.5	3.9	90.6	11° 01.926 N	085° 55.482 W	
153	05:30	873.74	222.9	4.0	97.3	11° 00.459 N	085° 56.985 W	
153	06:00	875.70	221.6	3.90	100.3	10 59.072 N	085 58.398 W	
153	06:30	877.62	218.0	3.70	104.0	10 57.680 N	085 59.802 W	
153	07:00	879.54	220.2	3.80	108.9	10 56.313 N	086 01.240 W	
153	07:30	881.47	223.2	3.70	117.1	10 54.925 N	086 02.632 W	
153	08:00	883.37	221.4	3.90	119.8	10 53.544 N	086 04.024 W	
153	08:30	885.31	224.8	3.80	145.3	10 52.141 N	086 05.430 W	
153	09:00	887.27	222.0	3.90	158.3	10 50.727 N	086 06.835 W	
153	09:07	—	—	—	—	10 50.396 N	086 07.205 W	End Line 14, stopped shooting
153	09:10	888.01	220.3	3.90	162.4	10 50.234 N	086 07.381 W	turning 130° to left
153	09:30	889.39	208.9	4.80	163.4	10 49.012 N	086 07.124 W	
153	10:00	891.70	95.8	4.80	146.1	10 48.724 N	086 04.169 W	
153	10:30	894.13	104.7	4.60	132.6	10 48.230 N	086 02.353 W	
153	11:00	896.40	118.3	4.50	114.8	10 47.362 N	086 00.189 W	
153	11:30	898.64	141.8	4.100	108.6	10 45.711 N	085 58.578 W	
153	11:52	900.36	224.0	4.40	114.9	10 44.201 N	085 58.735 W	finished turn to line 10
153	11:54	—	—	—	—	10 44.45 N	085 58.845 W	start shooting line 10

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SCIENCE WATCHSTANDER LOGPAGE 13

J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
153	12:00	900.93	214.3	4.30	118.3	10°43.703' N	085°59.175' W	500m mag anomaly
153	1230	903.18	220	4.8	126.7	10°42.170' N	086°00.806' W	
153	1300	905.57	222	4.6	138.8	10°40.506' N	086°02.526' W	
153	1330	907.88	220	4.9	143.7	10°38.812' N	086°04.277' W	
153	1400	910.32	224.6	4.80	133.3	10°37.052' N	086°06.054' W	
153	1430	912.60	223.3	4.20	120.8	10°35.374' N	086°07.791' W	
153	1500	915.08	224.0	4.90	131.1	10°33.659' N	086°09.521' W	
153	1530	917.47	220.2	5.00	147.2	10°31.942' N	086°11.302' W	
153	1600	919.86	219.8	4.50	251.2	10°30.263' N	086°13.035' W	
153	1630	922.37	218.9	5.1	477.7	10°28.506' N	086°14.846' W	
153	1700	924.93	217.3	5.10	909.4	10°26.782' N	086°16.620' W	
153	1730	927.5	217	5.2	1131.3	10°25.105' N	086°18.343' W	
153	18:00	930.03	217.7	5.3	1545	10°23.381' N	086°20.112' W	—
153	18:30	932.57	213.6	5.1	1848.3	10°21.629' N	086°21.925' W	—
153	19:00	935.04	216	4.7	2042	10°19.919' N	086°26.676' W	—
153	19:30	937.61	214	4.8	2391	10°18.192' N	086°28.452' W	—
153	20:00	940.22	211.4	5.40	2789.2	10°16.485' N	086°27.225' W	—
153	20:30	942.87	215	5.20	3272.1	10°14.712' N	086°29.022' W	
153	21:00	945.54	214.9	5.10	3610.1	10°12.965' N	086°30.803' W	—
153	21:30	948.03	217	5.30	3886	10°11.343' N	086°32.470' W	—
153	22:00	950.69	215.8	5.60	4553	10°09.656' N	086°34.200' W	—
153	22:30	953.47	217.5	5.10	5027.9	10°07.913' N	086°35.960' W	—
153	23:00	955.99	220.2	4.80	4566	10°06.199' N	086°37.751' W	—
153	23:30	958.7	218.8	5.30	4366	10°04.578' N	086°39.485' W	
153	24:00	961.24	219.0	5.10	4213.0	10°02.896' N	086°41.133' W	
154	00:30	963.85	215.2	5.6	3914.1	10°01.199' N	086°42.887' W	

J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
154	00:40	964.92	224.9	5.5	3896	10° 00.566 N	086° 43.524 W	Start Turn - End Line NIC 10
154	00:44	—	—	—	—	10° 00.325 N	086° 43.929 W	Start Line "Test" (transit to next line)
154	01:00	966.38	289.0	4.7	3860.1	10° 00.603 N	086° 44.869 W	
154	01:02	966.56	—	—	3857.1	10° 00.710 N	086° 45.063 W	turning another 10° [*] left degree
154	01:30	968.66	271.6	5.00	3773.1	10° 01.497 N	086° 47.136 W	
154	02:00	971.13	274.6	4.9	3500.1	10° 02.203 N	086° 49.447 W	
154	02:30	973.58	277.2	4.9	3497.1	10° 02.997 N	086° 51.770 W	
154	03:00	976.04	279.3	4.90	3456.1	10° 03.704 N	086° 54.103 W	
154	03:26	—	—	—	—	10° 04.390 N	086° 56.135 W	End - test line
154	03:30	978.58	277.7	4.8	3375.1	10° 04.441 N	086° 56.483 W	
154	04:00	980.97	326.8	4.6	3257.1	10° 05.488 N	086° 58.651 W	Start Line 22
154	04:16	—	40.2	4.1	3313.1	10° 06.732 N	086° 58.628 W	START Line NIC 22
154	04:30	983.18	47.2	4.6	3390.1	10° 07.441 N	086° 57.886 W	
154	05:00	985.43	46.1	4.6	3533.1	10° 09.175 N	086° 56.114 W	
154	05:30	987.71	41.8	4.5	3734.1	10° 10.872 N	086° 54.410 W	
154	06:00	989.99	45.5	4.1	3860.1	10° 12.580 N	086° 52.662 W	
154	06:17	991.39	38.8	5.0	4105.0	10 13.609 N	086 51.633 W	pulling in Sun 11 float break
154	06:20					10 13.750 N	086 51.493 W	noticed reel had not been advancing for the
154	06:23					10 13.931 N	086 51.308 W	trying to fix program
154	06:30	992.34	43.9	5.1	4170.0	10 14.323 N	086 50.912 W	
154	06:32	992.60	42.2	5.0	4180	10 14.453 N	086 50.777 W	Sun 11 put back in
154	06:43	—	—	—	—	10 15.034 N	086 50.190 W	program fixed now ready
154	07:00	994.69	46.7	4.40	4388.0	10 15.998 N	086 49.200 W	
154	07:30	997.10	43.5	4.70	4759.0	10 17.684 N	086 47.515 W	
154	08:00	999.57	45.3	5.30	5084.9	10 19.412 N	086 45.745 W	NEARING TRENCH
154	08:30	1001.98	44.9	4.90	4528.0	10 21.082 N	086 44.058 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LOH	REMARKS
154	0900	1004.39	48.8	4.60	4103.0	10 22.818 N	086 42.323 W	ITEMOFO OVER SCOPE
154	0930	1006.78	48.7	4.7	3723.1	10 24.500 N	086 40.620 W	
154	1000	1009.18	47.5	5.10	3209.1	10 26.221 N	086 38.868 W	
154	1030	1011.56	50.1	5.20	2606.2	10 27.969 N	086 37.110 W	
154	1100	1013.91	51.1	4.80	2209.2	10 29.628	086 35.416 W	
154	1130	1016.25	44.5	4.80	1858.3	10 31.249 N	086 33.785 W	Relensioner broke, again
154	1200	1018.79	51.6	4.90	1403.3	10 32.945 N	086 32.092 W	
154	1230	1021.31	47.6	5.10	1054.3	10 34.669 N	086 30.335 W	
154	1300	1023.95	43.5	5.30	818.4	10 36.424 N	086 28.558 W	
154	1330	1026.55	42.4	5.0	449.6	10 38.197 N	086 26.771 W	
	1352				38	10 35.2		
	1353							
	1358				284	10 39.545 N	086 25.388 N	thru line 22
154	1400	1029.04	40.4	4.60	278.5	10 39.948 N	086 24.977	
154	1430	1031.44	40.8	4.7	214.2	10 41.658 N	086 23.243 W	
	1433							Pull guns, start turn
	1436	1031.95			195	10 42.036 N	086 22.837 W	start turn
154							23.016	
154	1500	1033.06	308.4	4.6	196.5	10 43.696 N	086 23.016 W	turning
154	1530	1036.17	242.2	4.30	198.9	10 44.257 N	086 25.153 W	turning
154	1532	1036.47	233.4	4.88	198.9	10 44.103 N	086 25.446 W	starting line 26
	1552				236.8	10 42.683 N	086 26.868	Slowing to 4 Kts for traffic
154	1600	1038.45	220.7	3.0	236.8	10 42.683 N	086 26.866	
	1616						27.777	Adjusting Cse for traffic - at start Pt. 1126
154	1620					10 41.736 N	17.777 W	Speed up 4.0
154	1630	374.1	020	5.6	369	10 41.166	086 28.358 W	

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SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
154	1700	1043.05	212.3	5.20	729.0	10° 39.461 N	086° 30.136 W	
154	1730	1045.55	214.2	5.30	955.4	10° 37.759 N	086° 31.866 W	
154	1800	1048.13	209	4.7	1345	10° 35.994	086° 33.675	
154	18:30	1050.48	209.1	5.00	1724.3	10° 34.301 N	086° 35.388 W	
154	19:00	1052.99	212.1	4.90	1851.3	10° 32.589 N	086° 36.097 W	Some guns are being taken out of the water, so that they can put all the repaired back.
	19:14							
	19:14					MISSED around 5-6 shots		Problem Shooting
	19:16							Stop + Restart Shooting
154	19:30	1055.4	212.3	4.50	2485.2	10° 30.894 N	086° 38.822 W	-
154	20:00	1057.82	210.6	4.6	3296.1	10° 29.194 N	086° 40.552 W	
154	2030	1060.30	209.1	4.7	3783.	10° 27.472 N	086° 42.284 W	- all guns ^{20:51} back on line
154	21:00	1062.73	212.0	5.10	3949.1	10° 25.755 N	086° 44.031 W	-
154	21:30	1065.19	210.4	5.00	4219.0	10° 24.014 N	086° 45.777 W	
154	22:00	1067.61	210.9	5.00	4838	10° 22.303 N	086° 47.511 W	-
154	22:30	1070.15	212.2	5.10	4600	10° 20.530 N	086° 49.312 W	
154	23:00	1072.48	214.4	4.80	4326	10° 18.922 N	086° 50.927 W	
154	23:30	1074.94	210.6	5.10	4044	10° 17.235 N	086° 52.636 W	-
155	24:00	1077.39	212.3	4.50	3707.1	10° 15.60 N	086° 54.299 W	-
155	00:30	1079.88	215.8	5.00	3626.1	10° 13.831 N	086° 56.054 W	-
155	01:00	1082.38	213.8	5.00	3574.1	10° 12.095 N	086° 57.822 W	-
155	01:15	-	-	-	-	10° 11.068 N	086° 58.872 W	END Line NLC 26
155	01:30	1084.80	149.5	4.3	3356.2	10° 10.219 N	086° 59.080 W	
155	02:00	1087.52	52.6	4.9	3414.1	10° 09.943 N	086° 57.010 W	Start Line NLC 24 @ 02:00
155	02:30	1089.97	47.3	5.5	3686.1	10° 11.620 N	086° 55.213 W	
155	03:00	1092.35	47.4	4.80	3789.1	10° 13.335 N	086° 53.466 W	
155	03:30	1094.77	52.9	4.30	4151.0	10° 15.058 N	086° 51.725 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
155	04:00	1097.21	49.2	5.00	4371.0	10° 16.818N	086° 49.951W	
155	04:30	1099.58	49.9	4.70	4656.0	10° 18.562N	086° 48.178W	
155	05:00	1101.93	50.3	4.60	5059.9	10° 20.267N	086° 46.453W	
155	05:12	1102.90	51.4	4.7	4835	10° 20.995N	086° 45.713W	stopped line / restarted - T-timeout error
155	05:30	1104.33	45.5	5.2	4505.0	10° 22.005N	086° 44.711W	
156	06:00	1106.66	48.3	4.6	4048.1	10° 23.683N	086° 42.989W	
156	06:30	1108.97	54.0	4.70	3773.1	10 25.407N	086 41.266W	
156	07:00	1111.43	52.9	5.10	3332.1	10 27.145N	086 39.516W	
156	07:30	1113.87	56.3	4.80	2464.2	10 28.878N	086 37.759W	
156	08:00	1116.25	52.9	4.40	2139.2	10 30.599N	086 36.018W	
156	08:30	1118.63	53.2	4.50	1796.3	10 32.345N	086 34.227W	
156	09:00	1120.87	54.4	4.50	1377.3	10 34.017N	086 32.527W	
156	09:30	1123.18	52.5	4.7	1068.3	10 35.786N	086 30.762W	
156	09:33	1123.52	52.9	4.3	1051.0	10:35.991N	086 30.556W	2 GUNS OUT (AFRAME, 1 Port)
156	09:34							1 Gun out (Port)
156	09:35	1123.64	51.5	4.3	1016.3	10 36.140N	086 30.404W	3 GUNS OUT, THW 2 (AFRAME Port)
156	09:40	1124.08	56.6	4.6	968.4	10 36.424N	086 30.127W	1 out (AFRAME)
156	09:50	1124.74	50.6	4.7	853.4	10 36.933N	086 29.597W	2 out (both AFRAME)
156	10:00	1125.49	45.5	4.6	783.4	10 37.487N	086 29.036W	2 GUNS still out
156	10:30	1127.84	46.4	4.70	428.0	10 39.214N	086 27.273W	
156	10:38	1128.65	44.3	4.8	361.7	10 39.740N	086 26.743W	1 Gun out (AFRAME)
156	10:49	1129.42	44.4	4.9	303.4	10 40.367N	086 26.118W	END OF LINE 24, starting turn
156	11:00	1130.23	16.8	5.1	255.7	10 41.020N	086 25.598W	
156	11:30	1132.73	30.0	4.70	225.1	10 42.986N	086 26.800W	
156	11:43	1133.73	25.2	3.60	227.7	10 43.249N	086 27.245W	at completion turn
156	12:00	1134.99	26.9	4.70	281.7	10 42.497N	086 28.690W	shorting to line 28

J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
155	1230	1137.40	24.7	5.20	534.1	10° 40.710 N	086° 30.460 W	
155	1300	1139.9	21.5	5.2	914.4	10° 38.952 N	086° 32.221 W	
155	1330	1142.51	210.1	5.10	1290.4	10° 37.167 N	086° 34.012 W	
155	1400	1145.09	212.7	4.90	1586.3	10° 35.405 N	086° 35.796 W	
155	1430	1147.6	214.6	5.0	1818.3	10° 33.686 N	086° 33.566 W	
155	1500	1150.15	216.2	5.10	2465.2	10° 32.010 N	086° 39.242 W	
155	1530	1152.71	210.3	5.20	3147.1	10° 30.818 N	086° 40.959 W	
155	1600	1151.37	211.8	5.30	3577.1	28.551 N	42.738 W	
155	1630	1157.73	211.8	4.8	3963	10° 26.836 N	086° 44.494 W	
155	1700	1160.45	213.9	5.1	4248	10° 25.115 N	086° 46.215 W	
155	1730	1162.7	210.9	4.7	4774.0	10° 23.488 N	086° 47.952	
155	18:00	1165.45	213.5	4.9	4806.0	10° 21.684 N	086° 49.696 W	—
155	18:30	1167.6	211.5	5.3	4407.0	10° 19.920 N	086° 51.467 W	—
155	19:00	1170.55	210.5	4.9	3921.1	10° 18.195 N	086° 53.218 W	—
155	19:30	1173.12	213.7	5.00	3711.1	10° 16.493 N	086° 54.946 W	—
155	20:00	1175.58	213.6	5.00	3600.1	10° 14.863 N	086° 56.591 W	— Gun
								Gun 12 pulled out at 20:13:31
								Gun 13 Back 20:23:18
155	20:30	1178.8	220.5	5.00	3622.1	10° 13.140 N	086° 58.339 W	Guns 13/14/15 back 20:30
155	21:00	1181.03	219.2	5.10	3315.1	10° 11.329 N	087° 00.148 W	Gun 12 Gun 12 out 21:29
155	21:30	1183.63	219.1	5.3	3222.1	10° 09.691 N	087° 01.844 W	12
								END OF LINE N1C 28 (Turning)
155	22:00	1186.20	228.5	4.9	3081.1	10° 10.039 N	087° 04.229 W	No recording (turning)
155	22:30	1188.61	289.8	4.50	3095.1	10° 10.945 N	087° 06.517 W	Still turning & no recording.
155	23:00	1190	289.1	4.1	3091.1	10° 11.875 N	087° 08.718 W	Still Turning

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
155	23:30	1192.88	60.3	4.80	3092.1	10° 15.663 N	087° 09.012 W	START N/C 30
156	00:00	1195.36	47.1	4.60	3282.1	10° 15.354 N	087° 07.263 W	
156	00:30	1197.83	46.4	5.2	3436.1	10° 17.082 N	087° 05.561 W	
156	01:00	1200.33	40.7	4.7	3611.1	10° 18.891 N	087° 03.858 W	
156	01:30	1202.80	49.3	4.7	3853.1	10° 20.650 N	087° 02.186 W	
156	02:00	1205.27	42.0	4.6	4094.0	10° 22.392 N	087° 00.527 W	
156	02:30	1207.76	48.1	4.9	4161.0	10° 24.153 N	086° 58.857 W	
156	03:00	1210.22	43.0	5.4	4434.0	10° 25.905 N	086° 57.175 W	
156	03:30	1212.78	52.1	4.6	4745.0	10° 27.760 N	086° 55.421 W	
156	04:00	1215.16	49.6	5.0	4950.0	10° 29.503 N	086° 53.767 W	
156	04:30	1217.57	46.2	5.0	4367.0	10° 31.301 N	086° 52.053 W	
156	05:00	1219.93	44.6	4.8	4089.0	10° 33.072 N	086° 50.362 W	
156	05:30	1222.32	45.7	5.0	3413.1	10° 34.842 N	086° 48.687 W	
156	06:00	1224.66	49.9	4.70	2931.2	10 36.614 N	086 46.992 W	
156	06:30	1227.02	46.9	5.10	2499.2	10 38.347 N	086 45.338 W	
156	07:00	1229.48	49.2	5.20	2056.2	10 40.084 N	086 43.673 W	
156	07:30	1231.88	52.0	4.70	1630.3	10 41.858 N	086 42.000 W	
156	08:00	1234.17	49.5	4.80	1133.3	10 43.662 N	086 40.261 W	
156	08:30	1236.45	51.1	4.60	847.4	10 45.446 N	086 38.576 W	
156	09:00	1238.76	51.0	4.60	544.5	10 47.205 N	086 36.892 W	
156	09:30	1241.06	42.9	4.80	337.3	10 48.948 N	086 35.238 W	
156	10:00	1243.49	42.2	4.80	211.6	10 50.733 N	086 33.534 W	
156	10:30	1245.82	38.4	4.10	200.5	10 52.454 N	086 31.887 W	
156	11:00	1248.13	41.7	4.90	188.0	10 54.163 N	086 30.269 W	
156	11:30	1250.60	38.5	4.90	178.5	10 56.001 N	086 28.501 W	Gun 17 is being pulled in
156	12:00	1253.03	40.1	4.7	193.3	10 57.799 N	086 26.795 W	Gun 17 B/A on

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
156	12:30	1255.51	4.4	5.0	182.1	10° 59.572N	085° 25.123W	
156	1300	1258.5	38.5	4.8	175.1	11° 01.443N	086° 23.343W	
156	1330	1260.36	40.9	4.78	166.3	11° 03.736N	086° 21.711W	
156	1400	1262.71	41.8	4.80	153.1	11° 04.933N	086° 19.981W	(CSE 38.4)
156	1409							3.5 off to change paper
156	1427							3.5 on
156	1430	1265.19	39.8	4.80	137.9	11° 06.698N	086° 18.312W	
156	1431							End line 30
156	1500	1267.7	308.1	4.8	131.6	11° 08.737N	086° 18.827W	
156	1511	1268.84	306.8	4.8	130.0	11° 09.499N	086° 19.693W	Start line 31
156	1530	1270.08	302.3	5.10	132.0	11° 10.332N	086° 20.669W	
156	1600	1272.50	309.9	4.80	131.5	11° 11.929N	086° 22.536W	
156		1272.50						
156	1630	1274.84	309.7	4.60	129.30	11° 13.628N	086° 24.354W	
156	1641							End line 31
156	1700	1277.21	244.5	4.70	133.4	11° 14.347N	086° 26.468N	turning
156	1708			4.8	147.5	11° 12.727N	086° 17.271N	on line 40
156	1730	1272.63	222.1	4.8	147.5	11° 12.727N	086° 17.271N	
156	1747	1281.15	222.9	4.7	156.9	11° 11.846N	086° 29.224W	Begin of line 40
156	1747		213.1					
156	18:00	1281	4.80	4.30	162.2	11° 10.922	086° 29.901	-
156	18:30	1284.34	222.6	4.60	175.9	11° 09.156N	086° 31.507W	-
156	19:00	1286.73	222.7	4.90	162.5	11° 07.373N	086° 33.139W	- Gunn 10
156	19:30	1289.14	220.7	4.60	143.5	11° 05.563N	086° 34.823W	Gunn 10 out 19:27
156	20:00	1291.38	220.4	4.50	148.5	11° 03.889N	086° 36.394W	Gunn 78.9 out 19:34
156	20:08							Gunn Back in and running

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
156	20:30	1293.88	22.4	4.50	151.9	11° 02.019 N	086° 38.118 W	-
156	21:00	1296.26	22.1	5.00	150.8	11° 00.232 N	086° 39.764 W	-
156	21:30	1298.74	22.4	4.80	334.5	10° 58.404 N	086° 41.460 W	-
156	22:00	1301.11	202.6	4.80	506.1	10° 56.719 N	086° 43.016 W	-
156	22:30	1303.55	209.2	4.90	864.4	10° 54.915 N	086° 44.683 W	-
156	22:36							Gun 7 float broken
156	22:40	?						Gun 7 Back on water
156	23:00	1306.5	208.4	4.80	1227.3	10° 53.044 N	086° 46.423 W	-
156	23:30	1308.56	203.7	4.9	1451.3	10° 51.265 N	086° 48.076 W	-
157	00:00	1311.3	202.4	4.7	1807.3	10° 49.536 N	086° 49.661 W	-
157	00:30	1313.48	203.2	5.1	2339.2	10° 47.808 N	086° 51.257 W	-
157	01:00	1316.04	202.8	5.2	2691.2	10° 46.052 N	086° 52.894 W	-
157	01:30	1318.64	203.8	5.5	3219.1	10° 44.277 N	086° 54.521 W	-
157	02:00	1321.23	206.3	5.2	3775.1	10° 42.433 N	086° 56.246 W	-
157	02:30	1323.78	207.6	5.0	4179.0	10° 40.667 N	086° 57.876 W	-
157	03:00	1326.35	205.4	5.1	4680.0	10° 38.886 N	086° 59.521 W	-
157	03:30	1328.94	210.4	5.20	5172.9	10° 37.086 N	087° 01.176 W	-
157	04:00	1331.51	208.3	4.5	4864.0	10° 35.294 N	087° 02.861 W	-
157	04:30	1334.03	207.5	5.2	4512.0	10° 33.462 N	087° 04.550 W	-
157	05:00	1336.49	208.0	5.3	4310.0	10° 31.659 N	087° 06.217 W	-
157	05:30	1338.86	211.6	4.90	4071.0	10° 29.844 N	087° 07.874 W	-
157	06:00	1341.22	211.3	4.80	3975.1	10° 28.030 N	087° 09.574 W	-
157	06:30	1343.60	211.8	4.40	3562.1	10° 26.282 N	087° 11.181 W	-
157	07:00	1346.14	212.4	5.10	2935.2	10° 24.487 N	087° 12.819 W	-
157	07:30	1348.62	215.6	5.30	2244.2	10° 22.719 N	087° 14.116 W	-
157	08:00	1351.12	217.5	4.6	2952.2	10° 20.983 N	087° 16.116 W	-

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
157	0810							End of line 20, cruising to Ekman pt.
157	0825							Shut up off Alaple
157	0830	1353.42	216.1	4.30	2949.2	10 19.063N	087 17.1651W	Shut up off guns, pulling in 500's
157	0900	1355.48	250.2	3.90	2949.2	10 18.210N	087 17.594W	
157	0930	1357.50	254.3	4.00	2965.2	10 17.498N	087 21.649W	
157	1000	1359.19	265.0	1.90	2951.2	10 16.975N	087 23.383W	
157	1030	1360.10	261.3	1.30	2949.2	10 16.717N	087 24.280W	
157	1100	1360.99	240.0	1.40	2948.2	10 16.431N	087 25.362W	
157	1130	1361.92	301.0	0.20	2950.2	10 16.138N	087 26.288W	
157	1200	1362.29	269.5	0.90	2950.2	10 16.057N	087 26.619W	
157	1230	1362.76	318	0.9	2955.2	10 16.173N	087 27.136W	Still retrieving streamer
157	1300	1363.43	343	1.7	2950.2	10 16.646N	087 27.629W	"
157	1330	1364.42	278.6	1.4	2955.2	10 16.936N	087 28.726W	"
157	1400	1365.72	266.6	2.4	2955.2	10 17.021N	087 29.910W	"
157	1430	1366.63	262.2	4.6	2931.2	10 16.688N	087 31.378W	"
157	1500	1368.86	313.0	4.70	2973.2	10 16.846N	087 33.956W	"
157	1511		85	4.5				c/c 085
157	1515		83	2.8		10 17.463N	087 33.528W	Tail Buoy on Deck - i/s 10 KTS
157	1530	1371.90	80.6	10.5	2934.2	10 17.719N	087 31.847W	
157	1600	1377.2	82.5	10.8	2925.2	10 18.421N	087 26.793W	
157	1630	1382.50	80.5	11.2	2918.2	10 19.223N	087 28.241W	
157	1650		121.6	10.3	2943.2	10 18.960	087 17.658	starting HS line
157	1700	1388.02	129.9	10.2	2933.2	10 17.926	087 16.479	
157	1730	1393.07	132.7	10.4	3006.1	10 14.448	087 12.624	
157	1800	1398.	133.5	9.9	3098.0	10 10.971N	087 08.963W	
157	1830	3099.4	134.5	9.82	3093.1	10 07.420N	087 05.108W	-

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Hydro sweep off for OBH Recovery

J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
157	1900	1407.91	41.8	9.5	3159.1	10° 07.04 N	087° 01.351W	- Hydro sweep off
157	1930	1411.52	316.2	1.21	3159.1	10° 09.498 N	086° 58.521 W	-
157	1942	-	-	-	3159.1	10° 09.847 N	086° 58.577 W	OBH 1 recovered #9:
157	20:00	1413.01	41.6	10.6	3159.1	10° 10.655 N	086° 57.70 W	-
157	20:30	1418.42	42.9	10.8	3159.1	10° 14.765 N	086° 53.578 W	-
157	21:00	1423.7	52.1	10.5	3159.1	10° 18.644 N	086° 49.584 W	-
157	21:30	1425.01	315.1	0.43		10° 19.152 N	086° 48.758 W	-
157	21:45	1425.29	62	0.83		10° 19.381 N	086° 48.872 W	OBH 2 recovered
157	22:00	1426.81	44.2	11		10° 20.557	086° 47.716 W	-
157	22:30	1431.02	25.6	2.91		10° 23.209 N	086° 44.537	-
157	22:50	1431.50			3159.1	10° 23.640' N	86° 44.783' W	OBH 3 recovered
157	23:00	1431.49	46.4	1.11		10° 23.710 N	86° 44.750 W	-
157	2330	1435.85	63.4	3.52		10° 26.334 N	86° 41.416 W	-
158	00:00	1436.64	59.6	0.92	-	10° 26.674 N	086° 41.660 W	OBH 4 recovered
158	00:30	1440.36	44.1	11.0	3159.1	10° 29.211 N	086° 38.951 W	-
158	00:58			0.61	3159.1	10° 30.891 N	086° 37.366 W	OBH 5 recovered
158	01:00	1442.69	66.3	0.51	3159.1	10° 30.901 N	086° 37.356 W	-
158	01:30	1446.54	0.1	5.1	-	10° 33.437 N	086° 34.313 W	-
158	01:40	1446.91	-	-	-	10° 33.981 N	086° 34.328 W	OBH 6 recovered
158	02:00	1448.24	56.8	10.6	-	10° 35.061 N	086° 33.750 W	-
158	02:30	1452.34	70.4	0.30	-	10° 37.347 N	086° 30.374 W	-
158	02:43	1452.71	-	0.40	-	10° 37.757 N	086° 30.529 W	OBH 7 recovered
158	03:00	1452.91	25.2	1.40	-	10° 38.010 N	086° 30.592 W	-
158	03:30	1457.54	49.4	6.9	-	10° 40.655 N	086° 26.897 W	-
158	03:50	1458.60	-	-	-	10° 41.657 N	086° 26.611 W	OBH 8 recovered
158	04:00	1458.76	324.8	1.10	-	10° 41.767 N	086° 26.690 W	-

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
158	04:30	1462.79	44.9	10.8	—	10° 44.360 N	086° 23.761 W	Hydrosweep off for OBH recovery
158	05:00	1466.05	5.91	1.11	—	10° 46.598 N	086° 21.552 W	
158	05:02	1466.10	23.4	1.31	—	10° 46.646 N	086° 21.532 W	OBH 9 recovered.
158	05:30	1468.78	42.2	11.1	—	10° 48.496 N	086° 19.573 W	
158	06:00	1472.77	2.7	8.71	—	10° 51.277 N	086° 18.577 W	
158	06:11	1473.13	103.0	0.41	—	10 51.578 N	086 18.419 W	OBH 10 recovered
158	06:30	1475.63	42.5	10.8	—	10 53.342 N	086 16.506 W	
158	07:00	1479.98	310.7	9.20	—	10 56.357 N	086 11.457 W	
158	07:08	1480.26	346.2	0.80	—	10 56.625 N	086 11.518 W	OBH 11 recovered
158	07:30	1483.37	41.1	11.4	—	10 58.614 N	086 09.114 W	
158	08:00	1487.30	43.0	14.2	—	11 01.481 N	086 06.454 W	
158	08:04	1487.39	80.6	8.62	—	11 01.508 N	086 06.386 W	OBH 12 recovered
158	08:30	1491.23	40.2	11.0	—	11 04.188 N	086 03.464 W	
158	09:00	1494.51	80.08	0.40	—	11 06.415 N	086 01.199 W	
158	09:02	1494.53	86.7	0.20	—	11 06.414 N	086 02.180 W	OBH 13 recovered
158	09:30	1497.58	42.5	11.1	—	11 08.526 N	086 59.031 W	
158	10:00	1501.65	104.4	1.51	—	11 11.302 N	085 56.120 W	
158	10:08	1501.76	130.1	0.61	—	11 11.272 N	085 56.050 W	OBH 14 recovered, hydrosweep on
158	10:30	1502.09	211.8	4.61	—	11 11:001 N	085 56.103 W	
158	11:00	1505.88	215.3	9.60	—	11 08.324 N	085 52.874 W	
158	11:30	1510.81	219.4	9.40	—	11 04.550 N	086 02.198 W	Maggie or
158	11:36							1.1 mi NW of track, correct if course
158	12:00	1515.68	206.1	10.1	719.2	11 00.408 N	086 04.940 W	
158	12:13	1520.71	219.6	10.2		10 56.473 N	086 04.940 W	Online, completed turn
158	12:30	1520.71	219.6	10.2		10 56.473 N	086 08.218 W	
158	13:00	1525.67	217.6	10.0	181.3	10 52.747 N	086 11.685 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
158	1330	1530.73	216.	9.7	205.2	10° 49.108' N	086° 15.075' W	Hydrosweep survey
158	1400	1535.60	218.6	9.7	211.6	10° 45.471' N	086° 18.490' W	
158	1430	1540.36	221.3	10.0	191.4	10° 41.841' N	086° 21.926' W	
158	1500	1545.50	219.2	9.60	393.0	10° 38.087' N	086° 25.441' W	
158	1530	1550.27	156.0	9.95	834.4	10° 34.207' N	086° 27.898' W	
158	1600	1555.71	136.2	10.6	992.4	10° 30.450' N	086° 24.831' W	
158	1630	1561.22	136	10.5	1405.3	10° 26.576' N	086° 21.549' W	
158	1700	1566.44	136.7	10.6	1246.3	10° 23.168' N	086° 18.292' W	
158	1730	1573.64	135.6	11.1	1184.3	10° 18.762' N	086° 16.951' W	
158	18:00	1576.69	210.6	10.5	1560.3	10° 14.650' N	086° 16.589' W	
158	18:08		.	.				turning to line 141 18:08
158	18:30	1581.96	135.7	10.5	1914.3	10° 10.451' N	086° 15.969' W	turned finished 18:19:37
158	19:00	1587.22	139.7	10.2	1918.3	10° 06.625' N	086° 12.857' W	—
158	19:30	1592.38	136.5	10.6	1950.3	10° 02.540' N	086° 09.509' W	—
158	20:00	1597.59	137.1	10.4	1881.3	9° 58.528' N	086° 06.225' W	.
158	20:30	1602.57	856.1	8.00	1874.3	9° 56.002' N	086° 02.855' W	starting turn to next line 20:17
	20:33	finishing turn
158	21:00	1607.6	316	10.1	1577.3	10° 01.20' N	086° 06.267' W	—
158	21:30	1612.23	319.7	9.70	1628.3	10° 04.859' N	086° 09.134' W	—
158	22:00	1617.13	317.6	9.70	1617.15	10° 08.878' N	086° 12.406' W	—
158	22:30	1621.96	333.9	9.60	1603.3	10° 12.932' N	086° 15.623' W	—
159	23:00	1627.01	356.7	9.30	936.4	10° 17.300' N	086° 13.083' W	—
158	23:30	1631.7	313.1	9.70	1029.3	10° 21.638' N	086° 15.963' W	
158	00:00	1636.65	311.9	9.71	1233.3	10° 25.690' N	086° 19.419' W	—
159	00:30	1641.46	315.2	9.70	994.4	10° 29.627' N	086° 22.708' W	
159	01:00	1645.99	313.2	8.91	755.4	10° 33.491' N	086° 25.998' W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
159	01:30	1650.61	315.4	9.11	790.0	10° 37.416 N	086° 29.361 W	
159	02:00	1655.19	311.3	8.81	808.4	10° 41.290 N	086° 32.919 W	
159	02:30	1659.70	313.0	8.31	793.4	10° 44.904 N	086° 36.624 W	
159	03:00	1664.04	311.1	8.61	703.4	10° 48.408 N	086° 40.139 W	
159	03:30	1668.52	303.4	9.21	913.4	10° 51.893 N	086° 43.922 W	
159	04:00	1673.02	314.4	8.51	1063.3	10° 55.396 N	086° 47.267 W	
159	04:30	1677.36	14.9	8.61	884.4	10° 58.999 N	086° 50.001 W	
159	05:00	1681.76	129.5	10.3	1050.3	10° 58.530 N	086° 51.267 W	
159	05:30	1686.84	131.4	10.5	1178.3	10° 55.103 N	086° 47.942 W	
159	06:00	1691.80	131.8	10.6	1009.3	10° 51.690 N	086° 44.616 W	
159	06:30	1696.94	132.8	10.1	809.4	10 48.156 N	086 41.181 W	
159	0647					10 46.164 N	086 39.267 W	passing waypt. 12 starting turn to next line
159	0700	1702.08	109.3	10.4	803.4	10 45.056 N	086 37.525 W	
159	0717					10 44.378 N	086 39.538 W	finished turn, starting next line
159	0730	1707.05	315.1	10.0	949.4	10 46.172 N	086 41.069 W	passing waypt. 13
159	0800	1711.90	312.9	9.40	1131.3	10 50.028 N	086 44.726 W	
159	0830	1716.49	314.6	9.20	1279.3	10 53.730 N	086 48.185 W	
159	0852					10 56.434 N	086 50.724 W	passing waypt. 14. begin turn, some traffic
159	0900	1721.04	306.6	8.70	1171.3	10 57.578 N	086 51.375 W	
159	0930	1725.74	229.9	10.3	1362.3	10 55.147 N	086 51.220 W	0929 passing thru waypt. 15
159	1000	1730.88	132.7	10.0	1397.3	10 51.681 N	086 47.633 W	
159	1030	1736.06	128.2	10.2	1256.3	10 48.181 N	086 44.023 W	
159	1040					10 46.959 N	086 42.700 W	way pt. 16 & turning
159	1100	1741.12	205.5	10.1	1008.3	10 45.277 N	086 40.639 W	noticed 35 kHz has been off since 0940
159	1105					10 44.776 W	086 41.424 W	35 back on
159	1129					10 47.016 N	086 44.914 W	way pt. 17

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
159	1130	1746.27	308.9	10.3	1377.3	10°47.097'N	086°44.981'W	
159	1200	1750.89	328.4	9.20	1578.3	10°50.390'N	086°48.801'W	
	1219							Starting Turn
159	1230	1755.7	179	8.7	1855.3	10°51.705'N	086°52.525'W	
159	1300	1760.7	224	10.0	2840	10°47.684'N	086°55.111'W	
159	1330	1765.7	224	9.6	3926	10°44.475'N	086°59.187'W	
159	1400	1770.62	224.0	10.3	4942.0	10°41.298'N	086°03.337'W	
159	1430	1775.47	213.9	9.60	4519.0	10°38'14.9'N	087°07.133'W	
159	1500	1780.76	217.8	9.81	4026.0	10°34.571'N	087°10.586'W	
159	1515					10°32.602	087°12.447	End H's survey (WP13)
159	1530	1785.7	259	11.1	3765.1	10°32.168'N	087°15.204'W	
159	1600	1790.5	254	11	3410	10°31.316'N	087°20.187'W	Magic Off (1535)
159	1630	1793.5	623	2.11	3200.1	10°31.615'N	087°21.974'W	
159	1634				324.1	10°31.712'N	087°21.821'W	OBH #15 deployed.
159	1636							OBH #16 2' done
159	1700	1796.84	44.5	10.2	3608.1	10°33.914'N	087°19.883'W	
159	1730	1802	42.5	8.8	3875	10°37.720'N	087°16.601'W	
159	1740				3817	10°38.309'N	087°16.131'W	Start lowering anchor: OBH #16
159	1800	1803.1	256	0.91	3814	10°38.368'N	087°16.577'W	Launching OBH #16
159	18:04	1803.7	239	1.24	3850.1	10°38.361'N	087°16.718'W	OBH #16 Launched
159	18:30	1806	43.3	10.0	4122.0	10°40.557'N	087°14.272'W	
159	18:51:42	1808.80	22.7	1.11	4336.0	10°42.072'N	087°12.874'W	OBH #17 launched
159	19:00	1809.57	47.1	9.92	4383.0	10°42.654'N	087°12.404'W	
159	19:30	1814.22	37.2	9.40	1814	10°46.189'N	087°09.318'W	
159	19:47	1815		0.3	1815	10°47.444'N	087°08.272'W	OBH #18 Launched
159	20:00	1815		10.2	1817.56	10°48.694'N	087°07.199'W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
159	20:28	1820.98	63.8	1.31	390.4	10° 51.147 N	087° 05.068 W	OBH 19 Launched
159	20:30	1820.99	64.7	.61	389.5	10° 51.161 N	087° 05.063 W	
159	21:00	1825.07	40.7	4.11	312.1	10° 54.169 N	087° 02.477 W	
159	21:07	1825.50	62.1	1.71	297.2	10° 54.450 N	087° 02.246 W	OBH 20 Launched
159	21:30	1828.57	40.6	9.91	215.2	10° 56.691	087° 00.257 W	
159	21:46:10	1830.06	—	0.9	192.3	10° 57.755 N	086° 59.389 W	OBH 21 Launched
159	22:00	1831.69	42.9	10.0	160.8	10° 58.348 N	086° 58.329 W	
159	22:30	1835	294	1.03	107.2	11° 01.930 N	086° 55.855 W	
159	22:36	1835	160.	1.83	107.4	11° 01.892 N	086° 55.001 W	OBH 22 Launched
159	23:00	1839.11 1839.11	42.6	10.2	808.4	11° 04.220 N	086° 53.761 W	—
159	23:30	1843.40	52.5	3.20	345	11° 07.466 N	086° 51.011 W	
159	23:38	1843	304.9	0.6	310.6	11° 07.726 N	086° 50.799 W	OBH 23 Launched
160	00:00	1846.53	36.8	7.80	203.1	11° 09.903 N	086° 48.818 W	—
160	00:30	1850.86	40.7	3.71	189.3	11° 13.165 N	086° 46.036 W	
160	00:38	1851.23	297.8	1.91	189.6	11° 13.456	086° 45.867	OBH 24 Launched
160	01:00	1854.21	33.9	10.2	189.6	11° 15.599 N	086° 43.937 W	
160	01:30	1854.0	39.6	4.80	163.4	11° 18.017 N	086° 40.969 W	
160	01:34	1858.82	327.0	1.5	161.9	11° 19.701 N	086° 40.824 W	OBH 25 Launched
160	02:00	1862.86	38.6	10.5	136.6	11° 22.255 N	086° 38.161 W	
160	02:27	1866.33	1.9	1.71	112.4	11° 24.957 N	086° 35.844 W	OBH 26 Launched
160	02:30	1866.39	34.7	4.51	112.7	11° 25.032 N	086° 35.818 W	
160	03:00	1871.40	39.2	10.3	78.2	11° 28.816 N	086° 32.477 W	
160	03:23	1873.85	24.0	1.51	59.7	11° 30.728 N	086° 30.817 W	OBH 27 Launched
160	03:30	1874.51	40.3	9.21	58.8	11° 31.179 N	086° 30.421 W	
160	04:00	1879.60	37.6	10.5	32.4	11° 35.125 N	086° 26.967 W	
160	04:15:35	1881.39	10.4	1.2	26.4	11° 36.514 N	086° 25.799 W	OBH 28 Launched

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
160	04:30	1882.53	220.1	9.3	24.4	11° 35.770 N	086° 26.529 W	
160	05:00	1885.75	228.8	5.31	42.7	11° 34.477 N	086° 29.179 W	
160	0530	1888.20	280.1	4.81	52.3	11° 35.027 N	086° 31.730 W	
160	06:00	1890.69	276.5	4.91	57.3	11° 35.575 N	086° 34.241 W	
160	06:30	1893.13	281.4	4.9	62.3	11 36.171 N	086 36.584 W	
160	0700	1895.52	282.5	5.01	86.2	11 36.850 N	086 39.030 W	
160	0730	1897.97	284.5	5.81	68.2	11 37.551 N	086 41.452 W	
160	0800	1900.09	287.6	3.91	78.8	11 38.201 N	086 43.542 W	
160	0830	1902.08	340.8	3.91	83.4	11 39.016 N	086 45.363 W	
160	0900	1904.21	83.5	4.3	74.0	11 39.675 N	086 43.609 W	
160	0930	1906.31	94.0	4.4	68.8	11 39.545 N	086 41.373 W	
160	1000	1908.71	93.3	4.5	64.7	11 39.338 N	086 38.964 W	
160	1030	1911.27	88.5	5.41	55.5	11 39.117 N	086 36.276 W	
160	1100	1913.54	89.7	3.51	44.5	11 38.866 N	086 38.865 W	
160	1130	1915.22	95.7	3.11	37.8	11 38.706 N	086 32.234 W	
160	1200	1916.8	90.9	3.2	32.3	11° 38.644 N	086° 30.597 W	
160	1230	1918.3	93	3.7	28.0	11° 38.550 N	086° 29.044 W	Testing seismic system
160	1300	1920.5	89.6	4.6	22.1	11° 38.199 N	086° 26.818 W	Start turn to line 50H
160	1330	1922.9	212	3.9	26.3	11° 36.370 N	086° 25.911 W	Start Line 50H
160	1400	1924.7	217.3	3.91	35.8	11° 34.897 N	086° 27.221 W	
160	1430	1926.7	218	4.0	49.1	11° 33.370 N	086° 28.525 W	
	1444	Speed control problems						
160	1500	1929.1	218	4.6	58.6	11° 31.484 N	086° 30.140 W	
160	1530	1931.3	218	4.2	61.7	11° 29.819 N	086° 31.585 W	Speed back to 4 Kts
160	1600	1933.3	217	4.0	85.9	11° 28.307 N	086° 32.882 W	
160	1630	1935.2	217	3.8	97.8	11° 26.787 N	086° 34.210 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
160	1700	1937.21	214.7	4.1	109.1	11° 25.261 N	86° 35.528 W	
160	1730	1939.07	218.8	3.61	117.8	11° 23.785 N	86° 36.818 W	
160	1800	1941.1	215.6	4.0	134.6	11° 22.266 N	86° 38.114 W	
160	1830	1943.11	221	4.21	149.2	11° 20.681 N	086° 39.496 W	-
160	19:00	1945.10	217.3	4.01	160.9	11° 19.148 N	086° 40.815 W	-
160	19:30	1947.	217.7	4.51	173.7	11° 17.899 N	086° 42.146 W	- speed increased to depress (streamer problems) streamer
160	20:00	1949.41	218.1	4.61	186.0	11° 15.826 N	086° 43.689 W	Speed up to 4.6.
160	20:21	1950.57	222	4.2	187	11° 14.8979 N	86° 44.4911	shot 408 - 409 - stopped
	20:16							shooting for ~5 minutes
	20:28							between 20:16:49 ~ 20:21:35
								lost tail buoy 15:55
								ch 165 has problems (only noise)
160	20:30	1951.52	218.7	3.91	186.9	11° 14.186 N	086° 45.099 W	-
160	21:00	1953.56	221.3	4.41	188.3	11° 12.605 N	086° 46.466 W	-
160	21:30	1955.62	218.9	4.01	194.2	11° 11.063 N	086° 47.803 W	0.0m birds 10-18 (floated) 21:18
160	22:00	1957.51	219.5	4.11	195.2	11° 09.542 N	086° 49.106 W	- rescue boat out to find SR12?
160	22:30	1959.63	216.6	4.01	277.3	11° 07.909 N	086° 50.524 W	-
160	23:00	1961.62	200.5	4.6	421.9	11° 06.405 N	086° 51.831 W	-
160	23:30	1963.83	212.4	4.31	65.8	11° 04.786 N	086° 53.240 W	
160	00:00	1965.84	204.3	3.91	847	11° 03.172 N	086° 54.628 W	
161	00:30	1968.06	206.0	4.01	1087.0	11° 01.662 N	086° 55.930 W	
161	01:00	1970.11	203.5	4.01	1381.1	10° 00.111 N	086° 57.273 W	
161	01:30	1972.25	200.5	4.21	1688.3	10° 58.586 N	086° 58.584 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
161	02:00	1974.39	205.6	3.91	2061.2	10° 57.057 N	086° 59.895 W	
161	02:30	1976.59	198.6	4.51	2589.2	10° 55.543 N	087° 01.204 W	
161	03:00	1978.78	200.5	4.71	3173.1	10° 53.978 N	087° 02.564 W	Acq. Errors we missing
161	03:30	1980.99	207.1	4.51	3562.1	10° 52.432 N	087° 03.901 W	236, 240, 237, 259, 235, 233, 238
161	03:26	—	—	—	—	10° 52.630 N	087° 03.871 W	- stopped recording - too many errors
—	—	—	—	—	—	—	—	↳ still shooting @ 60 sec (pic 50 H)
161	04:00	1982.99	202.4	4.11	3947.1	10° 50.879 N	087° 05.226 W	
161	04:30	1984.99	202.7	3.51	4423.0	10° 49.410 N	087° 06.506 W	
161	04:56	—	—	—	—	10° 48.019 N	087° ——— W	start recording System (NIC 50 H)
161	05:00	1986.99	201.9	4.21	4286.0	10° 47.882 N	087° 07.819 W	
161	05:30	1989.02	205.6	4.01	5261.9	10° 46.306 N	087° 09.187 W	
161	06:00	1990.96	208.3	3.91	5011.9	10° 44.789 N	087° 10.479 W	
161	06:30	1992.90	204.5	3.71	4612.0	10° 43.279 N	087° 11.774 W	
161	07:00	1995.00	212.5	3.91	4391.0	10° 41.771 N	087° 13.103 W	
161	07:30	1996.98	209.6	4.01	4099.0	10° 40.251 N	087° 14.404 W	
161	08:00	1999.03	207.5	4.01	3849.1	10° 38.718 N	087° 15.738 W	
161	08:30	2001.09	207.0	4.21	3831.1	10° 37.152 N	087° 17.083 W	
161	09:00	2003.11	204.3	4.51	3709.1	10° 35.623 N	087° 18.396 W	
161	09:30	2005.18	212.0	3.91	3610.1	10° 34.083 N	087° 19.722 W	
161	10:00	2007.20	212.4	3.91	3415.1	10° 32.536 N	087° 21.060 W	
161	10:30	2009.25	216.3	4.31	3134.1	10° 31.019 N	087° 22.361 W	
161	11:00	2011.35	217.6	4.11	3036.1	10° 29.410 N	087° 23.699 W	
161	11:30	2013.31	220.7	3.91	2882.2	10° 27.966 N	087° 25.006 W	
161	12:00	2015.26	218.0	3.71	2826.2	10° 26.464 N	087° 26.291 W	
161	12:30	2863.2	219	3.6	2866	10° 24.968 N	87° 27.600 W	
161	13:00	2019.2	214	3.5	2920	10° 23.446 N	87° 28.915 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
161	1330	2021.1	214	4.2	2917	10° 21.963' N	87° 30.155' W	
161	1348	2022.36	215.3	4.2	2947.2	10° 21.004' N	87° 30.986' W	end line 50H
161	1400	2023.36	263.1	4.8	2949.2	10° 20' 44.7' N	87° 31' 7.2' W	
161	1413	2024.4	201.5	4.5	2945.1	10° 20' 88.6' N	87° 32' 7.28' W	beginning turn
161	1430	2025.7	216	4.8	2960	10° 20.8819' N	87° 33.843' W	
161	1500	2028.0	67	4.9	2957	10° 19.457' N	87° 32.756' W	
161	1530	2030.5	36	5.0	2947	10° 21.036' N	87° 30.961' W	Outline NICS0
161	1600	2033.0	41	5.1	2895	10° 22.860' N	87° 29.397' W	
161	1630	2035.6	34	5.6	2867	10° 24.710' N	87° 27.795' W	
161	1700	2038.04	38.9	4.71	2830.2	10° 26' 53.8' N	87° 26' 20.1' W	
161	1730	2040.48	40.2	4.9	2950.2	10° 28.400' N	87° 24' 6.17' W	
161	1800	2042	37.6	5.01	3162.1	10° 30.195' N	087° 23.040' W	-
161	18:30	2045.3	35.0	5.01	3364.1	10° 32.113' N	087° 21.415' W	
161	19:00	2047.78	41.6	5.01	3606.1	10° 33.906' N	087° 19.858' W	
161	19:30	2050.74	41.4	5.51	3705.1	10° 35.828' N	087° 18.221' W	-
161	20:00	2052	46.2	5.21	3859.1	10° 37.608' N	087° 16.677' W	
161	20:30	2055	44.9	5.01	3943.1	10° 39.488' N	087° 15.057' W	
161	21:00	2058	45.3	5.31	4386	10° 41.324' N	087° 13.325' W	450
161	21:30	2060	42.3	5.11	4509	10° 43.182' N	087° 11.867' W	
161	22:00	2063	42.3	4.91	4999	10° 45.022' N	087° 10.269' W	
	22:25							- Shot # went to 0
	↓							FFIB Sam
	↓							Lost Nav Head
161	22:30	2065	42.6	5.31	5056.9	10° 46.933' N	087° 08.625' W	Stopped & Restarted Shooting
161	23:00	2068	43.6	5.11	4704	10° 48.679' N	087° 07.123' W	
161	23:30	2070.8	47.2	4.91	3969	10° 50.569' N	87° 05.492' W	- 23:39 Lost ~ 2 min Shots

RESEARCH VESSEL MAURICE EWING

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SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
162	00:00	2073.	40.7	4.91	3584.	10°52.360N	082°03.938W	
162	00:30	2075.97	45.2	4.61	2991.2	10°54.361N	087°02.213W	
162	01:00	2078.41	43.9	4.51	2334.7	10°56.190N	087°00.653W	
162	01:30	2080.85	46.3	4.71	1803.3	10°58.073N	086°59.006W	
162	02:00	2083.34	41.3	5.11	1403.3	10°59.954N	086°57.399W	
162	02:30	2085.79	35.1	4.81	1067.3	11°01.832N	086°55.746W	
162	03:00	2087.92	36.9	4.31	807.4	11°03.681N	086°54.161W	
162	03:30	2090.21	45.5	4.31	474.6	11°05.517N	086°52.576W	
162	04:00	2092.53	40.8	4.81	349.0	11°07.359N	086°50.987W	
162	04:30	2094.93	35.5	4.71	207.3	11°09.236N	086°49.361W	
162	05:00	2097.28	36.4	4.71	195.2	11°11.075N	086°47.794W	
162	05:30	2099.69	36.6	4.81	188.8	11°12.929N	086°46.183W	
162	06:00	2102.07	34.1	4.51	189.0	11°14.766N	086°44.593W	
162	06:30	2104.41	34.4	4.81	182.9	11°16.630N	086°42.981W	
162	07:00	2106.80	37.5	5.01	147.0	11°18.491N	086°41.371W	
162	07:30	2109.21	40.6	5.11	151.4	11°20.361N	086°39.761W	
162	08:00	2111.63	37.5	5.01	135.0	11°22.225N	086°38.141W	
162	08:30	2114.07	36.0	5.01	114.8	11°24.121N	086°36.500W	
162	09:00	2116.44	35.6	4.11	104.0	11°25.957N	086°34.903W	
162	09:30	2118.85	36.2	4.31	89.2	11°27.834N	086°33.296W	
162	10:00	2121.25	39.3	4.81	61.5	11°29.642N	086°31.718W	
162	10:30	2123.64	38.9	4.71	54.4	11°31.541N	086°30.080W	
162	11:00	2126.05	36.7	4.71	45.2	11°33.412N	086°28.461W	
162	11:30	2128.38	38.0	4.81	31.5	11°35.246N	086°26.878W	
162	11:43					11°36.038N	086°26.202W	Guns 11+12 off
162	11:49					11°36.423N	086°25.859W	Starting turn off line SD

RESEARCH VESSEL MAURICE EWING

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LOH	REMARKS
162	1155	2130.39	2.9	4.57	22.8	11° 36.862N	086° 25.656W	End line 50, guns off
162	1200	2130.71	340.8	4.41	22.2	11° 37.245N	086° 25.688W	
162	1230	2132.12	301.8	4.31	22.0	11° 38.772N	86° 27.519W	turning to line 60
162	1300	2135.3	314	4.5	22.3	11° 40.386N	86° 29.153W	On dog leg - not shooting
162	1330	2137.61	311.8	4.61	22.5	11° 42.070N	86° 30.854W	
	1355							Starting turn to line 60
162	1400	2139.95	267.4	4.71	24.6	11° 43.544N	86° 32.712W	
162	1430	2142.35	248.4	4.4	31.8	11° 42.209N	86° 34.537	
162	1500	2144	217	4.5	49.4	11° 40.546N	86° 36.043W	
162	1530	2147	217	4.8	61.7	11° 38.679N	86° 37.635W	
162	1600	2149.9	217.4	4.61	69.8	11° 36.786N	86° 39.293W	
162	1630	2151.6	215.2	4.7	81.6	11° 34.983	86° 40.872	
162	1636	2152	216	4.7	83	11° 34.528	86° 41.272	End line
162	1700	2153.95	282.3	4.01	91.0	11° 33.694N	86° 42.702W	pulling in guns
162	1730	2156.0	278	3.9	99.2	11° 34.177N	86° 44.709W	- pulling streamers back.
162	1800	2158.0	248.6	3.8	104.9	11° 34.748N	86° 46.747W	-
162	1830	2159.85	131.4	0.81	106.9	11° 33.425N	86° 46.075W	-
162	1900	2160.42	112.5	1.11	105.0	11° 33.265N	86° 45.540W	-
162	1930	2160.94	68.1	0.81	104.	11° 33.235N	86° 44.999W	-
162	2000	2161.42	81.9	0.81	101.4	11° 33.260N	86° 44.536W	-
162	2030	2162.02	98.25	1.31	98.5	11° 33.099N	86° 43.914W	-
162	2100	2162.59	99.15	1.21	96.6	11° 32.979N	86° 42.395W	-
162	2130	2163.22	109.5	1.21	95.8	11° 32.713N	86° 42.798W	-
162	2200	2163.81	121.2	1.11	93.2	11° 32.481N	86° 42.291W	-
162	2230	2164.50	130	1.61	91.3	11° 31.999N	86° 41.773W	-
162	2300	2168.66	72.9	10.4	78	11° 32.497N	86° 37.585W	

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RESEARCH VESSEL MAURICE EWING

SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
162	23:30	2173	60.7	10.8	57.2	11° 34.279 N	086° 32.420 W	
162	00:00	2179.85	73.9	10.8	26.8	11° 36.595 N	086° 28.452 W	
163	00:23	-	-	-	-	11° 36.536 N	086° 25.737 W	OBH #1 recovered
163	00:30	2181.40	214.7	7.61	24.7	11° 36.429 N	086° 25.798 W	
163	01:00	2186.40	220.0	10.0	51.7	11° 32.697 N	086° 29.336 W	
163	01:28	2188.89	-	0.60	59.6	11° 30.733 N	086° 30.845 W	OBH #2 recovered
163	01:30	2188.90	208.0	0.80	59.1	11° 30.720 N	086° 30.851 W	
163	02:00	2193.58	216.2	10.8	95.3	11° 27.387 N	086° 34.216 W	
163	02:28	-	-	-	110.0	11° 24.984 N	086° 35.867 W	OBH #3 recovered
163	02:30	2198.05	195.1	0.20	110.8	11° 24.979 N	086° 35.863 W	
163	03:00	2200.56	217.5	10.20	140.5	11° 22.169 N	086° 38.685 W	
163	03:30	-	-	-	161.4	11° 19.260 N	086° 40.892 W	OBH #4 recovered
163	03:30	2204.18	260.0	0.70	161.5	11° 19.260 N	086° 40.893 W	
163	04:00	2208.54	214.5	10.4	188.4	11° 16.087 N	086° 43.950 W	
163	04:28	-	-	-	190.1	11° 13.502 N	086° 46.002 W	OBH #5 recovered
163	04:30	2211.80	256.1	1.12	190.5	11° 13.494 N	086° 46.022 W	
163	05:00	2216.32	216.0	10.6	207.0	11° 10.209 N	086° 49.203 W	
163	05:26	2219.27	-	0.80	317.3	11° 07.794 N	086° 50.930 W	OBH #6 recovered
163	05:30	2219.22	230.6	5.10	330.8	11° 07.739 N	086° 50.005 W	
163	06:00	2224.52	209.1	10.3	893.4	11° 03.909 N	086° 54.563 W	
163	06:24	2226.86	202.0	0.11	1084.3	11° 02.007 N	086° 55.948 W	OBH #7 RECOVERED
163	06:30	2227.04	209.6	10.1	1113.1	11° 01.825 N	086° 56.161 W	
163	07:00	2231.82	209.6	5.0	1807.1	10° 58.214 N	086° 59.169 W	
163	07:20	2232.38	300.6	0.90	1896.3	10° 57.965 N	086° 59.595 W	OBH #8 RECOVERED
163	07:30	2234.02	216.6	10.7	2224.2	10° 56.836 N	087° 00.452 W	
163	08:00	2236.99	190.9	0.72	2974.2	10° 54.561 N	087° 02.382	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
163	08:17	2237.34	222.3	0.82	2978	10° 54.592 N	087° 02.556 W	OBH #9 RECOVERED
163	08:30	2238.89	207.4	10.5	3443.1	10 53.370 N	087 03.499 W	
163	09:00	2241.40	227.7	0.61	3879.0	10 51.421 N	087 05.324 W	
163	09:30	2241.86	100.5	1.31	3916.1	10 51.184 N	087 05.443 W	
163	09:44	2242.20	141.0	0.21	3889.1	10 51.340 N	087 05.386 W	OBH #10 RECOVERED
163	10:00	2243.96	217.7	10.5	4199.0	10 50.114 N	087 06.485 W	
163	10:30	2246.93	179.3	0.84	4869.0	10 47.824 N	087 08.418 W	
163	10:41	2247.17	137.2	0.74	4896.0	10 47.647 N	087 08.419 W	OBH #11 RECOVERED
163	11:00	2249.46	220.1	10.1	5781.9	10 46.045 N	087 10.052 W	
163	11:30	2253.92	173.7	2.50	4340.0	10 42.550 N	087 13.054 W	
163	12:00	2254.30	102.9	0.80	4383.0	10 42.353 N	087 13.234 W	
163	12:19	2254.87	144.5	0.60	4374.0	10 42.153 N	087 12.900 W	OBH #12 RECOVERED
163	1230	2255.9	226	10.8	4391	10° 41.515' N	87° 13.528' W	
163	1300	2259.9	182	2.0	3792	10° 38.642' N	87° 16.553' W	
163	1308	2260.1	184	0.6	3820	10° 38.409' N	87° 16.685' W	OBH #13 Recovered
163	1330	2262.6	216.7	10.4	3712	10° 36.600' N	87° 18.418' W	
163	1400 1400	2262.6	205.5	8.20	3408.1	10° 32.462 N	87° 21.841 W	
163	1430	2268.7	135	1.1	3235.1	10° 31.741' N	87° 21.796' W	OBH #14 Recovered
163	1500	2269	213	0.7	3184	10° 31.637' N	87° 22.196' W	Shaft repair in progress
163	1530	2270	183.7	4.2	3151	10° 30.768 N	87° 22' 484 W	engine repair in progress
163	1600	2271.41	39.1	4.8	3185.1	10° 31.488 N	87° 22' 012	deploy streamer
163	1630	2273.67	47.5	4.2	3497.1	10° 31' 243 N	87° 20' 764 W	deploy streamer
163	1700	2275.5	45.8	4.5	2577.1	10° 34' 860 N	87° 19' 318 W	deploy streamer
163	1730	2278.1	49.5	4.0	3092.1	10° 36' 241 N	87° 17' 877 W	-
163	1800	2280	46.9	3.7	3864	10° 77.654 N	87° 16' 257 W	-
163	1830	2281.94	48.2	2.8	3862.1	10° 38.658	87° 15.377 W	-

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RESEARCH VESSEL MAURICE EWING

SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
163	19:00	2283.8	219.5	3.0	3805.1	10° 39.199N	087° 16.551W	—
163	19:30	2285.45	220.4	3.6	3811.1	10° 38.004N	087° 17.964W	—
163	20:00	2287.38	217.8	3.5	3745.1	10° 36.588N	087° 19.574W	—
163	20:30	2289.41	219.4	4.0	3626.1	10° 35.128N	87° 21.188 W	—
163	21:00	2291.32	138.9	3.6	3456.1	10° 33.592N	87° 22.472W	—
163	21:30	2293.40	45.8	4.5	3618.1	10° 34.537N	87° 20.976W	—
163	22:00	2295.44	55.0	3.30	3612.1	10° 35.800N	87° 19.626W	—
163	22:30	2297.40	70.7	4.7	3697.1	10° 36.337N	87° 17.897W	—
163	23:00	2299.55	72.8	4.5	3871.1	10° 36.923N	87° 16.031W	—
163	23:23	2302.02	45.4	5.10	3967.1	10° 38.573N	87° 14.429W	—
164	00:00	2304.59	44.0	5.10	4386.0	10° 40.434N	87° 12.842W	Start Line Channel 10 (noisy) NIC 54
164	00:30	2307.20	42.4	5.20	4470.0	10° 42.220N	087° 11.292W	
164	01:00	2309.79	45.2	4.70	5020.9	10° 44.078N	087° 09.689W	
164	01:30	2312.34	45.9	5.00	5071.9	10° 45.925N	087° 08.100W	
164	02:00	2314.98	43.2	5.20	4716.0	10° 47.758N	087° 06.508W	
164	02:30	2317.44	44.0	5.00	4016.0	10° 49.498N	087° 05.020W	
164	03:00	2319.96	43.8	5.40	3647.1	10° 51.298N	087° 03.453W	
164	03:30	2322.52	47.7	5.10	3133.1	10° 53.159N	087° 01.875W	
164	04:00	2325.09	45.0	5.10	2516.2	10° 55.014N	087° 00.253W	
164	04:30	2327.62	53.6	4.90	1952.3	10° 56.881N	087° 58.632W	
164	05:00	2330.15	42.6	4.60	1573.0	10° 58.767N	086° 57.007W	
164	05:30	2332.57	49.6	4.70	1184.3	11° 00.618N	086° 55.415W	
164	06:00	2334.99	45.0	4.80	839.5	11° 02.247N	086° 53.869W	
164	06:30	2337.47	41.1	4.70	543.7	11 04.299N	086 52.245W	
164	06:54	2339.35	40.1	4.6	471.5	11 05.725N	086 51.027N	EOL S4, BEGIN TURN
164	07:00	2339.88	10.4	4.8	396.6	11 06.177N	086 50.793N	STOP SIBIRIAN RECORDING

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RESEARCH VESSEL MAURICE EWING

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SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
→ 164	0730	2341.93	233.9	4.10	423.4	11 07.401 N	086 52.434 W	BOL NIC 56 (07:32)
164	0800	2344.12	204	4.8	737.5	11.05.741 N	086.53.879 W	
164	0814	2345.38	208.3	4.7	877.4	11.04.785 N	086 54.708 W	BIRD 8 2 M SHALLOW
164	0830	2346.52	208.2	4.8	1014.3	11 03.875 N	086 55.517 W	SHALLOW FINE
164	0900	2348.88	211.1	5.0	1228.3	11 01.962 N	086 57.161 W	
164	0930	2351.32	209.5	4.6	1526.3	11 00.101 N	086 58.770 W	
164	1000	2353.54	211.7	4.5	1891.3	10 58.282 N	087 00.341 W	
164	1030	2355.79	208.4	4.7	2425.2	10 56.411 N	087 01.961 W	
→ 164	10:47	2357.13	210.6	4.7	2890.2	10 55.354 N	087 02.865 W	PROBLEM IN ENGINE ROOM -
	10:55							NOT SHOOTING GUNS
164	10:55	2357.59	213.2	4.6	3061.8	10 54.783 N	087 03.338	GUNS BACK ON
164	11:00	2357.99	209.1	4.4	3136.0	10 54.615 N	087 03.496	
164	11:30	2360.16	202.1	4.2	3677.1	10 52.779 N	087 05.094 W	
164	12:00	2362.45	206.3	4.8	4097.0	10 50.914	087 06.731	
164	1230	2364.64	206.4	4.8	4770.0	10° 48' 964	087° 08' 390	
164	1300	2366.92	209.3	4.4	5248.9	10° 46.985 N	087° 10' 086 W	
164	1330	2369.11	203	4.1	4842	10° 45.176 N	87° 11' 635 W	
164	1400	2371.12	202.3	4.4	4395.0	10° 43.363 N	87° 13' 220 W	
164	1430	2373.4	202	4.7	4149	10° 41.521 N	87° 14.793 W	
164	1500	2375.6	197	4.5	8976	10° 39.654 N	87° 16.341 W	
164	1530	2377.4	164.6	4.6	3832.1	10° 37.663 N	87° 17.350 W	Changing line:
164	1600	2380.2	50.0	5.3	3826.0	10° 36.358 N	87° 18.822 W	
164	1630	2382.6	47.3	5.6	3800.1	10° 37.244 N	87° 14.214 W	
164	1642	2383.9	47.8	5.4	3989.1	10° 38.056 N	87° 13.456 W	begin line 52
164	1700	2385.5	49	5.5	4227.0	10° 39.097 N	87° 12.569 W	
164	1730	2388.3	50	5.5	4310	10° 40.923 N	87° 10.996 W	

J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
164	18:00	2390.82	50.6	5.6	4716.0	12°58'42.742N 10°42.742N	087°09:421W	-
164	18:30	2393.61	51.1	5.8	5263	10°44.642N	087°07:726W	-
164	19:00	2396.37	51.6	5.20	4745	10°46.492N	087°06.171W	-
164	19:30	2398.97	47.9	4.90	4132	10°48.328N	087°04.593W	
164	20:00	2401.57	48.2	5.40	3710.1	10°50.184N	087°02.977W	
164	20:30	2404.18	57.1	5.20	3147	10°52.039N	087°01.379W	
164	21:00	2406.92	47.7	5.50	2677.2	10°53.896N	086°59.769W	
164	21:30	2409.75	49.1	5.30	2080.	10°55.757N	086°58.156W	
164	22:00	2412.50	49.6	5.70	1649	10°57.594N	086°56.578W	
164	22:30	2415.80	49.9	5.10	1323.3	10°59.488N	086°54.953W	-
164	23:00	2418.04	50.8	5.2	898.1	10° 11°01.329N	086°53.353W	- gun 4 & 5 out 23:00
164	23:30	2420.74	46.8	5.4	606.4	11°03.180N	086°51.744W	gun 3 out 23:10
165	00:00	2423.28	41.9	4.10	401.7	11°05.042N	086°50.180W	all Guns Back! 23:56
165	00:30	2425.89	39.1	4.10	220.3	11°06.870N	086°48.537W	
165	01:00	2428.26	36.0	5.10	169.4	11°08.699N	086°46.975W	
165	01:30	2430.69	36.1	4.70	148.2	11°10.568N	086°45.360W	
165	02:00	2433.15	35.6	4.70	172.6	11°12.467N	086°43.710W	- start turn off Line N1C52
165	02:30	2435.65	325.7	5.10	186.1	11°14.628N	086°43.090W	- End turn to transit line
165	03:00	2438.08	313.5	4.70	186.5	11°16.470N	086°44.730W	
165	03:30	2440.52	309.9	4.60	176.0	11°18.197N	086°46.496W	
165	04:00	2442.95	307.4	4.90	166.0	11°19.922N	086°48.273W	
165	04:30	2445.39	308.3	4.80	154.8	11°21.661N	086°50.028W	
165	05:00	2447.75	221.5	4.60	145.0	11°22.070N	086°52.103W	
165	05:06	-	-	-	-	11°21.709N	086°52.437W	NOT received GPS on Tailboom for last
165	05:30	2450.18	218.7	4.60	148.4	11°20.182N	086°53.673W	(came back on 05:07) 2 min
165	06:00	2452.44	220.2	4.70	154.2	11°18.391N	086°55.212W	

RESEARCH VESSEL MAURICE EWING

CRUISE EW00005

SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
165	0630	2454.85	22.0	4.60	187.5	11 16.547 N	086 56.833 W	
165	0700	2457.22	23.3	4.90	350.9	11 14.778 N	086 58.377 W	
165	0730	2459.66	208.6	4.80	525.7	11 12.865 N	087 00.040 W	
165	0800	2462.13	201.7	5.30	983.3	11 11.003 N	087 01.663 W	
165	0830	2464.53	206.7	4.60	1112.3	11 09.155 N	087 03.261 W	
165	0900	2466.94	209.6	4.70	1544.3	11 07.303 N	087 04.888 W	
165	0930	2469.36	198.8	4.60	2061.2	11 05.461 N	087 06.492 W	
165	1000	2471.73	200.8	4.70	2428.2	11 03.603 N	087 08.095 W	
165	1030	2474.10	205.1	5.10	2908.2	11 01.766 N	087 09.706 W	
165	1100	2476.45	198.3	4.60	3463.1	10 59.933 N	087 11.295 W	
165	1117					10 58.939 N	087 12.163 W	Gun 10 out, front rope broken
165	1130	2478.77	202.2	4.70	3834.1	10 58.145 N	087 12.850 W	
165	1152					10 56.744 N	087 14.060 W	Gun 10 back on
165	1200	2481.07	204.1	4.50	4486.0	10° 56' 32.9 N	087° 14' 43.7 W	
165	1230	2483.6	203	4.6	4965	10° 54.408' N	87° 16.100' W	
	1237							Gun #4 off
165	1300	2485.8	202	4.5	5104	10° 52' 54.5 N	87° 17' 72.6 W	
165	1312							Gun #4 back
165	1330	2488.15	202.5	5.2	4732.0	10° 50' 66.4 N	87° 19' 36.2 W	
165	1400	2490.65	196.7	4.5	4377.0	10° 48' 80.6 N	87° 20' 97.5 W	
165	1430	2493.9	209	4.4	4072	10° 46.984' N	87° 22.548' W	
165	1500	2495.17	202.7	4.5	3800.1	10° 45' 08.9 N	87° 24' 21.0 W	
165	1530	2497.53	201.4	4.9	3678.1	10° 43' 25.7 N	87° 25' 79.0 W	
165	1600	2499.9	200.6	4.9	3523.1	10° 41.443' N	87° 27.365' W	
165	1630	2502.3	205	4.6	3472.1	10° 39.550' N	87° 28.988' W	
165	1700	2504.5	204	4.4	3174.1	10° 37.746' N	87° 30.591' W	

RESEARCH VESSEL MAURICE EWING

CRUISE EW0005

SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
165	1730	2506.9	207	4.4	3001.1	10° 35.886'N	087° 32.200'W	
165	1800	2509.2	204.3	4.5	2912.2	10° 34.003	087° 33.834W	
165	1830	2511.5	198	4.9	2896.2	10° 32.257	087° 35.372	Starting Turn
								END line NIC 60, 18:40
165								Start line NIC 60C 18:43
165	19:00	2513.69	317	3.70	2949.2	10° 32.468N	087° 37.662W	
165	19:30	2515.65	316	3.80	2935.	10° 34.441 N	087° 39.555W	
165	20:00	2517.54	304.1	3.80	2941.2	10° 36.321N	087° 41.450W	
165	20:30	2519.46	305.8	3.60	2973.2	10° 38.054N	087° 43.434W	
165	21:00	2521.45	311.2	4.20	2991.2	10° 39.844	087° 45.461	Turn started
165	21:10	2522	311.5		3020.1	10° 40.848N	087° 45.964	Beginning Line NIC 20
	21:25	2523				10° 41.744N	087° 45.492	completed Turn
165	21:30	2523.7	54.3	5.60	2979.2	10° 41.951N	087° 45.222W	
165	22:00	2526.18	54.	5.00	2978	10° 43.543N	087° 43.388W	
165	22:30	2528.74	56.4	5.10	3049.1	10° 45.288N	087° 41.614W	-
165	23:00	2531.2	57.5	4.90	3092	10° 47.031N	087° 39.935W	
165	23:30	2533	51.3	4.90	3305	10° 48.831N	087° 38.228W	
165	00:00	2536	54.1	4.50	3447	10° 50.565N	087° 36.564W	
166	00:30	2539.01	54.8	4.80	3833.1	10° 52.398N	087° 34.815W	
166	01:00	2541.51	48.6	5.20	3945.1	10° 54.160N	087° 33.110W	
166	01:30	2543.96	56.1	4.60	4185.0	10° 55.909 N	087° 31.455W	
166	02:00	2546.41	49.5	4.80	4374.0	10° 57.629 N	087° 29.810 W	
166	02:30	2548.75	50.4	4.70	4843.0	10° 59.313 N	087° 28.182 W	
166	03:00	2551.29	49.1	5.50	5097.8	11° 01.092N	087° 26.487W	
166	03:30	2553.80	46.0	5.70	4943.0	11° 02.872 N	087° 24.773W	
166	04:00	2556.39	49.0	4.70	4623.0	11° 04.681N	087° 23.043W	

CRUISE EW0005RESEARCH VESSEL MAURICE EWING
SCIENCE WATCHSTANDER LOGPAGE 42

J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
166	04:30	2558.88	45.8	5.40	3993.1	11° 06.477N	087° 21.333W	
166	05:00	2561.36	47.3	5.30	3498.1	11° 08.243N	087° 19.660W	
166	05:30	2563.96	49.1	4.70	2726.0	11° 10.046N	087° 17.917W	
166	06:00	2566.32	49.2	4.60	2159.0	11° 11.805N	087° 16.234W	
166	06:30	2568.71	50.1	4.90	1756.3	11 13.568N	087 14.536W	
166	07:00	2571.17	46.0	4.70	1359.3	11 15.401N	087 12.787W	
166	07:30	2573.54	46.7	4.90	1049.3	11 17.187N	087 11.084W	
166	08:00	2575.83	46.6	4.90	814.4	11 18.963N	087 09.382W	
166	08:30	2577.97	47.4	4.20	627.4	11 20.701N	087 07.718W	
166	09:00	2580.21	48.3	4.50	415.0	11 22.466N	087 06.019W	
166	09:30	2582.78	38.9	5.10	206.9	11 24.233N	087 04.312W	
166	09:44					11 25.117N	087 03.480W	Gun 14 off
166	09:47					11 25.276N	087 03.335W	Gun 15 off
166	10:00	2585.39	40.2	5.6	155.6	11 25.953N	087 02.673W	
166	10:08					11 26.544N	087 02.112W	Gun back on
166	10:30	2588.19	41.1	6.0	146.9	11 27.815	087 00.901W	
166	10:48					11 28.877N	086 59.857W	Gun w on turn
166	10:58					11 29.513N	086 59.350W	start up turn
166	10:59					11 29.610N	086 59.315W	stopped shooting
166	11:00	2590.58	12.2	5.0	140.5	11 29.680N	086 59.287W	
166	11:11					11 30.566N	086 59.435W	start up ^{all but three guns} line 70c, 50 m shot interval
166	11:30	2593.04	314.4	4.5	131.6	11 31.693N	087 00.573W	
166	12:00	2595.36	311.4	4.9	127.8	11 33.354N	087 02.302W	
166	12:30	2597.7	311.8	4.6	117.3	11° 34.982'N	87° 03.999'W	
166	13:00	2600.1	295	4.7	109.6	11° 36.677'N	87° 05.832'W	End line 70c
166	13:30	2602.3	221.3	4.6	106.5	11° 35' 823' N	87° 07' 848' W	in line 89

CRUISE EW 0005RESEARCH VESSEL MAURICE EWING
SCIENCE WATCHSTANDER LOGPAGE 43

J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
166	1400	2604.7	225.0	4.9	125.8	11° 34' 171 N	087° 09' 485 W	
166	1430	2607.13	220.5	4.9	150.3	11° 32' 381 N	087° 11' 227 W	
166	1500	2609.5	221.3	4.7	285.7	11° 30' 556 N	087° 12' 886 W	
166	1530	2612.1	216	4.9	455.5	11° 28' 805 N	87° 14' 708 W	
166	1600	2614.5	220.1	4.7	674.4	11° 27' 037 N	87° 16' 438 W	
166	1630	2617.0	216	5.1	823.4	11° 25' 295 N	87° 18' 131 W	
166	1700	2619.5	213	5.0	982.4	11° 23' 540 N	87° 19' 848 W	
166	1730	2622.0	212	4.9	1236.3	11° 21' 751 N	87° 21' 588 W	
166	1800	2624.	211.3	4.7	1604.3	11° 19' 972 N	87° 23' 345 W	
166	1830	2626.71	208.7	4.7	2083	11° 18' 268 N	87° 25' 014 W	
166	1900	2629.17	213.5	4.70	3202.1	11° 16' 453	87° 26' 779 W	
166	1930	2631.47	216.3	4.90	3919.1	11° 14' 747	087° 28' 445 W	
166	2000	2633.85	216.8	4.60	4115.	11° 12' 981 N	087° 30' 181 W	
166	2030	2636.17	214	4.60	4672	11° 11' 219 N	087° 31' 907 W	
166	2100	2638.45	213.5	4.50	5331.	11° 09' 452 N	087° 33' 615 W	
166	2130	2640.69	215	4.60	5142.9	11° 07' 688 N	087° 35' 344 W	Gun 12 lost Float ^{Bringing} it in
166	2200	2642.85	213.7	4.20	4865	11° 05' 937 N	087° 37' 043 W	
166	2230	2645.02	214.4	4.40	4422	11° 04' 186 N	087° 38' 747 W	22:40 Gun 12 Back in
166	2251				3987.1	11° 02' 920 N	087° 39' 997 W	EOLine BIC 84
166	2256	2646.98	222.3	4.10	3858.1	11° 02' 587 N	087° 40' 340 W	BOLine NIC 86 Turning
166	2300	2647.20	236.	4.30	3886	11° 02' 436 N	087° 40' 538	Beginning of End of
166	2358					11° 04' 749 N	087° 41' 311 W	SOLine NIC 86 Turning
166	0000	2651.4	48.3	5.20	4413	11° 04' 861	087° 41' 197 W	
167	0030	2654.06	44.0	5.20	4604.0	11° 06' 494 N	087° 39' 527 W	
167	0100	2656.62	42.7	5.50	4889.0	11° 08' 199 N	087° 37' 869 W	
167	0130	2659.33	42.8	5.00	5396.9	11° 09' 921 N	087° 36' 198 W	

86 Turn

CRUISE EW0005

RESEARCH VESSEL MAURICE EWING

SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
167	02:00	2662.07	41.8	5.50	4909.0	11° 11.694 N	087° 34.471 W	
167	02:30	2664.89	43.6	5.70	4537.0	11° 13.501 N	087° 32.693 W	
167	03:00	2667.58	47.7	5.60	4037.0	11° 15.262 N	087° 30.983 W	
167	03:30	2670.35	45.6	5.70	3502.1	11° 17.046 N	087° 29.243 W	
167	04:00	2673.07	44.5	5.40	2614.2	11° 18.788 N	087° 27.528 W	
167	04:30	2675.78	41.1	5.60	1774.3	11° 20.567 N	087° 25.807 W	
167	05:00	2678.19	34.5	4.60	1386.3	11° 22.326 N	087° 24.084 W	
167	05:30	2680.59	45.1	4.90	1081.3	11° 24.078 N	087° 22.371 W	
167	06:00	2683.00	34.2	5.00	912.4	11° 25.831 N	087° 20.670 W	
167	0630	2685.59	33.4	4.90	743.4	11 27.673 N	087 18.856 W	
167	0700	2687.96	34.7	5.0	568.5	11 29.438 N	087 17.145 W	
167	0707					11 29.849 N	087 16.737 W	End of line 86
167	0730	2690.25	129.8	4.60	441.0	11 29.630 N	087 15.127 W	
167	0800	2692.61	211.1	4.60	507.3	11 27.581 N	087 14.395 W	
167	0801					11 27.506 N	087 14.455 W	Begin shooting line 82
167	0830	2694.86	218.7	3.9	732.8	11 25.873 N	087 16.042 W	
167	0832	2695.05	214.3	4.8	747.4	11 25.667 N	087 16.235 W	Compressor Problems Low Pressure
167	0849	2696.35	220.6	4.5	818.4	11 24.682 N	087 17.213 W	Pressure still maxing out at 1900
167	0900	2697.08	217.1	4.2	868.4	11 24.048 N	087 17.824 W	only 8 guns on, down to 5/6001
167	0903					11 23.830 N	087 18.027 W	we lost 4 back on; 0904 all but
167	0925					11 22.568 N	087 19.284 W	14 guns out
167	0930	2699.23	218.8	4.2	1072.3	11 22.282 N	087 19.552 W	10 guns on
167	0941					11 21.637 N	087 20.187 W	5 guns on
167	1000	2701.88	217.7	4.30	1349.3	11 20.498 N	087 21.290 W	
167	1030	2703.49	209.1	3.80	1741.3	11 18.747 N	087 23.012 W	
167	1100	2705.57	214.7	4.10	2543.2	11 16.968 N	087 24.744 W	

CRUISE EW ODDS

RESEARCH VESSEL MAURICE EWING

SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
167	1130	2707.63	212.7	4.00	3438.1	11° 15.164'N	087° 26.522'W	
167	1200	2709.64	217	3.9	4028.0	11° 13.405'N	87° 28.227'W	
167	1230	2711.64	216	4.1	4328	11° 11.630'N	87° 29.961'W	
167	1300	2713.61	215	4.1	4980.0	11° 09'784'N	87° 31'749	
167	1330	2715.6	209	4.1	5401.0	11° 07'975'N	87° 32'527'W	
167	1400	4849.0	213	3.8	4813.0	11° 06'217'N	87° 35'218'W	
167	1430	2719.5	214	3.9	4460	11° 04.442'N	87° 36.960'W	
167	1500	2721.35	205	3.8	4165	11° 02.722'N	87° 38.659'W	
167	1530	2723.30	206	4.1	3996	11° 00.950'N	87° 40.385'W	
167	1600	2725.3	207.5	3.9	3729.1	10° 59.112'N	87° 42'160'W	
167	1630	2727.20	212.5	3.9	3494.1	10° 57'388'N	87° 43'846'W	
167	1700	2729.16	201.3	4.2	3542.1	10° 55'618'N	87° 45'505'W	
167	1730	2731.28	195	4.1	3350	10° 53.853'N	87° 47.302'W	
167	18:00	2733	200.5	4.10	3093	10° 52.131'N	87° 48.986'W	
167	18:30	2735.32	196.5	4.20	3029.1	10° 50.398'N	87° 50.887'W	-
167	19:00	2737.52	202.3	4.30	2816.2	10° 48.625'N	87° 52.396'W	Gun 10 out 18:41:14
167	19:30	2739.70	202.9	4.60	2739.8	10° 46.886'N	87° 54.100'W	-
167	20:00	2741.95	208.8	4.00	2755.1	10° 45.012'N	87° 55.940'W	Gun 10 back 19:41
167	20:30	2744.0	204.2	4.00	2834.1	10° 43.285'N	87° 57.604'W	-
167	20:48	2745.30	205.7	4.20	2745.34	10° 42.195'N	87° 58.643'W	END OF LINE MCB2
167	21:00	2746.109	218.9	4.00	2907.2	10° 41.803'N	87° 59.472'W	- turning to line 80
167	21:30	2748.18	36.0	4.40	2887.0	10° 43.281'N	88° 01.035'W	- turning to line 80
167	22:00	2750.52	61.9	4.90	2835.2	10° 44.537'N	87° 59.441'W	- started shooting line 80, 21:41
167	22:30	2752.00	60.5	4.90	2832.2	10° 45.972'N	87° 57.970'W	-
167	23:00	2755.54	46.4	5.7	2831.2	10° 47.510'N	87° 56.472'W	-
167	23:22	-	-	-	-	10° 48.857'N	87° 55.160'W	Missed Shot at Tape change - Both Taps Ejected at once

RESEARCH VESSEL MAURICE EWING

CRUISE EW 0005

SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
167	16723:30	2758.35	46.5	5.40	2909.2	10° 49.371 N	087° 54.61 W	
168	00:00	2761.1	48.8	5.40	2978.2	10° 51.152 N	087° 52.929 W	
168	00:30	2763.88	45.6	5.80	3039.1	10° 52.921 N	087° 51.214 W	
168	01:00	2766.65	48.0	5.40	3350.1	10° 54.710 N	087° 49.444 W	
168	01:30	2769.35	48.6	5.20	3437.1	10° 56.466 N	087° 47.740 W	
168	02:00	2771.89	46.1	5.30	3398.1	10° 58.161 N	087° 46.072 W	
168	02:30	2774.64	45.1	5.10	3591.1	10° 59.948 N	087° 44.358 W	
168	03:00	2777.33	45.6	5.70	3889.1	11° 01.698 N	087° 42.628 W	
4	03:30	2780.11	43.9	5.70	3960.0	11° 03.484 N	087° 40.898 W	
168	04:00	2782.84	49.6	5.10	4588.0	11° 05.224 N	087° 39.206 W	
168	04:30	2785.63	46.9	5.50	4845.0	11° 06.988 N	087° 37.474 W	
168	05:00	2788.40	46.2	5.40	5259.9	11° 08.739 N	087° 35.768 W	
168	05:30	2791.18	47.7	5.70	5088.9	11° 10.477 N	087° 34.064 W	
168	06:00	2793.91	56.1	5.50	4996.0	11 12.261 N	087 32.334 W	
168	06:30	2796.63	43.0	5.60	4158.0	11 14.010 N	087 30.625 W	
168	07:00	2799.34	49.0	5.20	3586.1	11 15.786 N	087 28.891 W	
168	07:30	2801.99	52.3	5.40	2820.2	11 17.557 N	087 27.156 W	
168	08:00	2804.59	47.6	5.50	2000.3	11 19.303 N	087 25.440 W	
168	08:30	2807.21	50.5	5.40	1502.3	11 21.059 N	087 23.724 W	
168	09:00	2809.84	59.3	5.10	1153.3	11 22.835 N	087 21.993 W	
168	09:30	2812.41	51.8	5.40	944.4	11 24.557 N	087 20.295 W	
168	10:00	2815.01	50.4	5.00	793.4	11 26.336 N	087 18.585 W	
168	10:30	2817.44	54.1	5.10	627.4	11 28.122 N	087 16.816 W	
168	11:00	2819.88	37.3	5.10	428.3	11 29.887 N	087 15.084 W	
168	11:16	2821.45	35.7	4.7	321.0	11 30.863 N	087 14.144 W	CUN #7 OFF
168	11:30	2822.36	37.4	4.90	247.1	11 31.657 N	087 13.365 W	

CRUISE E60006

RESEARCH VESSEL MAURICE EWING

SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
168	1200	2848.8	38.0	4.8	140.5	11° 33' 41.6 N	87° 11' 62.2 W	Pit log (2824.8)
168	1230	2827.8	40.0	4.9	118.5	11° 25' 25.3 N	87° 09' 84.8 W	
168	1300	2829.76	42	5.2	109.3	11° 36.998' N	87° 08.140' W	
168	1330	2832.15	37.4	4.9	112.8	11° 38' 80.5 N	87° 06' 36.7 W	
168	1400	2834.68	40	4.8	126.2	11° 40.600' N	87° 04.620' W	
	1417							Start slowing to 4 kts
	1430							
	1431							Start 40 s recording
	1500	2838.93	31.7	3.9	114.4	11° 43.726' N	87° 01.556' W	
	1530	2840.4	38	4.1	110.9	11° 45.195' N	87° 00.119' W	
	1600	2842.86	38	4.0	108.7	11° 46.648' N	86° 58.689' W	
168	1630	2844.79	3.9	3.8	103.4	11° 48' 09.5	86° 57' 27.0 W	
168	1700	2846.75	45.0	4.0	99.3	11° 49' 53.0	86° 55' 86.6 W	
168	1730	2848.79	40	4.0	93.1	11° 50.979' N	86° 54.449' W	
168	1800	2850.67	40	3.80	40.3	11° 52.408' N	86° 53.052' W	
168	1830	2852	41	3.90	78.	11° 53.824' N	86° 51.675' W	
168	19:00	2854	40	3.90	71.	11° 55.221' N	86° 50.297' W	Turning ^{19:07} EOLine 86
168	19:12	2855.38	15	3.80	68	11° 55.901	86° 49.763	Start of Line 80 C
168	19:30	2856.51	333	3.90	66.9	11° 56.966' N	086° 50.074' W	
168	19:39	2857.15	327	3.90	65.2	11° 57.548' N	086° 50.372' W	Done w/ Turn
168	20:00	2858.28	326	4.00	65.7	11° 58.719' N	086° 50.968' W	Gun #9 Back in
168	20:30	2860.40	327.8	4.00	59.9	12° 00.449' N	86° 51.871' W	-
168	21:00	2862.38	326.3	4.10	55.6	12° 02.307' N	086° 52.869' W	
168	21:30	2864.35	328	4.00	50.9	12° 04.088' N	086° 53.773' W	
168	22:00	2866.25	326	3.8	47.3	12° 05.790' N	086° 54.712' W	

NK 90

RESEARCH VESSEL MAURICE EWING

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SCIENCE WATCHSTANDER LOG

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
168	22:30	2868.29	329.7	4.10	46.0	12° 07.594 N	86° 55.688 W	—
168	23:00	2870.28	323.4	4.10	38.2	12° 09.385 N	86° 56.687 W	—
168	23:30	2872.27	332	3.8	33.6	12° 11.231 N	86° 52.571 W	—
169	00:00	2874.27	319.8	3.9	29.7	12° 13.061 N	86° 58.469 W	—
169	00:30	2876.30	324.9	3.90	26.6	12° 14.785 N	086° 59.560 W	—
169	01:00	2878.31	322.8	3.90	23.7	12° 16.532 N	087° 00.617 W	—
→ 169	01:30	2880.15	271.5	3.90	22.8	12° 18.005 N	087° 01.848 W	SMIT NK 90
169	02:00	2882.13	212.0	3.90	31.6	12° 16.876 N	087° 03.396 W	did not notice increase in speed
169	02:18	2883.29	—	—	—	12° 15.926 N	087° 04.138 W	speeding up from 4 knots to 4.5 knots to escape fishing traffic
169	02:30	2884.10	216.1	3.80	39.4	12° 15.241 N	087° 04.624 W	—
169	03:00	2886.03	213.8	3.70	48.0	12° 13.644 N	087° 05.844 W	—
169	03:30	2887.96	213.3	4.10	65.1	12° 12.099 N	087° 07.058 W	—
169	04:00	2889.89	216.2	3.80	73.7	12° 10.507 N	087° 08.254 W	—
169	04:30	2891.78	215.2	3.80	82.0	12° 09.001 N	087° 09.432 W	—
169	05:00	2893.73	215.6	4.00	91.9	12° 07.386 N	087° 10.654 W	—
169	05:30	2895.74	218.2	3.70	100.8	12° 05.738 N	087° 11.926 W	—
169	06:00	2897.72	213.1	3.70	104.8	12° 04.207 N	087° 13.101 W	—
169	06:30	2899.68	217.1	4.0	110.9	12° 02.591 N	087° 14.346 W	—
169	07:00	2901.60	218.7	4.0	113.7	12° 01.024 N	087° 15.551 W	Noisy wave display - SEE SEISMIC LOG
169	07:30	2903.56	214.2	3.80	115.7	11° 59.433 N	087° 16.758 W	—
169	08:00	2905.51	209.4	3.60	119.9	11° 57.853 N	087° 17.971 W	—
169	08:30	2907.87	214.5	4.80	122.4	11° 55.908 N	087° 19.476 W	—
169	09:00	2910.25	214.2	4.60	124.6	11° 53.985 N	087° 20.935 W	—
169	09:30	2912.69	215.6	4.90	136.0	11° 52.010 N	087° 22.546 W	—
169	10:00	2915.05	216.5	4.70	163.6	11° 50.089 N	087° 23.945 W	—
169	10:30	2917.45	213.6	4.90	192.9	11° 48.130 N	087° 25.437 W	—

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
169	1100	2919.77	221.8	4.80	253.6	11 46.289N	087 26.875W	
169	1130	2922.14	219.2	4.60	290.0	11 44.314 N	087 28.357W	
169	1200	2924.63	203	5.4	675.7	11 42.405 N	87° 29.832W	
169	1230	2927.09	204	4.9	988.4	11° 40.500'N	87° 31.283'W	
169	1300	2929.53	212	5.0	1249.3	11° 38.587'N	87° 32.751'W	
169	1330	2932.04	206.8	4.9	1487.3	11° 36.580'N	87° 34.289'W	
169	1400	2934.5	194.6	4.8	1651.4	11° 34.676N	87° 35.788W	
169	1430	2936.89	203	4.9	1802.3	11° 32.807'N	87° 37.195'W	
169	1500	2939.35	206	4.5	2016.2	11° 30.898'N	87° 38.666'W	
169	1530	2941.75	204	5.2	2840.2	11° 28.980'N	87° 40.104'W	
169	1600	2944.13	198	4.6	3558.1	11° 27.081'N	87° 41.577'W	
	1610							Slowing to 4.5 Kts
169	1630	2946.35	223.3	4.2	3940.1	11° 25.229 N	87° 42.984 W	
169	1700	2948.58	202	3.9	4259.0	11° 23.441'N	87° 44.363'W	
169	1730	2950.60	201	5.1	4877.0	11° 21.681 N	87° 45.707W	
169	1800	2952.91	202.6	4.50	5229.0	11° 19.809 N	87° 47.124 W	-
169	1830	2955.06	200.1	4.20	5368.9	11° 18.030 N	87° 48.484 W	-
169	1900	2957.27	204.8	4.90	5981.1	11° 16.225 N	87° 49.889 W	-
169	1930	2959.49	203.0	4.70	4906.0	11° 14.434 N	87° 51.251 W	-
169	1945	2960	202.8	4.5	4532	11° 13.459 N	87° 52.060 W	Starting Turn
→ 169	1952	2961.24	250.2	3.7	4503	11 13.192 N	87 52.450W	START LINE NIC90C
	1956	"	"	"	"			SMEAMEN SET TO 12m
169	20:00	2961	277	3.8	2961	11° 13.163 N	087 53.066 W	
169	20:27	2963	296	3.60	2975.4	11° 14.510 N	087 54.944 W	on line 90 C
169	20:30	2963	305	4.30	4461	11° 14.605 N	087 55.086 W	
169	21:00	2965	299.	3.90	4565	11° 15.922	087 57.206 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
169	21:30	2967.2	296	3.60	4465	11° 17.250N	087 59.322W	-
169	22:00	2968.26	299.0	4.10	4397	11° 18.364N	088 01.436W	-
169	22:30	2970	291.5	3.90	4407	11° 19.920N	088 03.567W	-
169	23:00	2972.86	292.1	3.60	4426.0	11° 21.270N	088 05.742W	-
169	23:30	2974	293	3.70	4332	16° 22.598N	088 07.872W	
170	00:00	2976.69	292.5	3.90	4497.0	11° 23.947N	088 09.998W	
170	00:30	2978.66	9.16	3.40	4643.0	11° 25.745N	088 11.654W	
170	01:00	2980.94	46.1	4.80	4939.0	11° 27.658N	088 10.321W	
170	01:30	2983.20	47.2	4.50	4959.0	11° 29.576N	088 08.952W	
170	02:00	2985.49	46.3	4.90	5193.0	11° 31.519N	088 07.591W	
170	02:30	2987.61	43.1	4.40	4850.0	11° 33.338N	088 06.326W	
170	03:00	2989.77	40.1	4.10	4889.0	11° 35.185N	088 05.028W	
170	03:30	2991.99	40.3	4.60	4158.0	11° 37.087N	088 03.689W	
170	04:00	2994.17	46.6	4.50	3745.0	11° 38.919N	088 02.395W	
170	04:30	2996.36	35.6	4.10	3393.1	11° 40.772N	088 01.104W	
170	05:00	2998.56	33.1	4.30	3088.1	11° 42.619N	087 59.821W	
170	05:30	3000.75	39.0	4.20	2902.2	11° 44.429N	087 58.546W	
170	06:00	3003.00	35.0	4.00	2489.2	11° 46.276N	087 57.262W	
170	06:30	3005.23	32.3	3.80	2171.2	11 48.165N	087 55.940	
170	07:00	3007.41	41.3	4.30	1878.3	11 50.040N	087 54.630	
170	07:30	3009.58	39.2	4.40	1639.3	11 51.882N	087 53.344W	
170	08:00	3011.79	44.8	4.20	1336.3	11 53.730N	087 52.062W	
170	08:30	3014.08	42.2	4.60	1009.3	11 55.645N	087 50.702W	
170	09:00	3016.27	38.7	4.00	838.4	11 57.424N	087 49.460W	
170	09:30	3018.40	35.0	4.20	700.4	11 59.281N	087 48.171W	
170	10:00	3020.54	31.4	3.80	407.3	12 01.112N	087 46.886W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
170	1030	3022.76	30.0	4.20	223.4	12 03.035N	087 46.524W	
170	1100	3025.10	28.2	4.60	169.1	12 04.978N	087 44.180W	
170	1128					12 06.740N	087 42.936W	Gun 11 off
170	1130	3027.29	31.3	4.60	146.0	12 06.824N	087 42.828W	
170	1200	3029.58	33.2	4.7	130	12 08.706'N	87° 41.565'	
170	1230	3031.82	33	4.5	121.4	12° 10.595'N	87° 40.241'	Gun 11 on
170	1300	3032.93	32	4.1	114.3	12° 12.390'N	87° 38.995'W	
170	1330	3035.90	34.1	3.8	113.7	12° 14' 097N	87° 37' 794W	
170	1400	3037.82	31.2	3.9	110.2	12° 15' 723N	87° 36' 661W	
170	1430	3039.75	29	4.1	103	12° 17.303'N	87° 35.558'W	
170	1500	3041.74	27	4.1	93.2	12° 18.948'N	87° 34.407'W	
170	1530	3043.67	31.8	3.8	85.5	12° 20' 650'N	87° 35' 227W	
170	1600	3045.57	28.2	4.2	78.6	12° 22' 280N	87° 32' 066W	
170	1630	3047.52	20.2	3.90	73.6	12° 23' 894W	87° 30' 925W	
170	1700	3049.54	30	3.8	69.9	12° 25.557'W	87° 29.774'W	
170	1730	3051.50	32	4.0	64.3	12° 27.194'N	87° 28.618'W	
170	18:00	3053	33	3.60	58.2	12° 28.766N	87° 27.513W	
170	18:30	3055	28.7	4.10	51.4	12° 30.374N	87 26.394 W	
170	19:00	3057	31.5	3.90	43.7	12° 32.108N	087 25.164 W	
170	19:30	3059.23	37.2	3.90	29.4	12° 33.767N	87° 24.50W	Gun 11 & 12 off 19:29 for turn
	19:31			END	OF	LINE	NIC/DO	(stop shooting)
170	19:55							Done w/ Turn
170	20:00	3061	29.7	4.60	26.0	12.35.330	087 24.820 W	
170	20:30	3063	29.8	4.70	26.3	12.36.585N	087 27.055 W	20:36 Starting Shooting 100C
170	20:36	3064	29.6	4.70	29.0	12.36.852 N	087 27.523 W	
170	21:00	3066	29.6	4.80	32.4	12° 37.794N	87° 29.081W	-

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
170	21:30	3068.45	299.8	4.80	35.5	12° 39.094 N	87° 31.304 W	-
170	22:00	3070	299	4.50	35.9	12° 40.363 N	087° 33.443 W	
	22:03							Gun #12 will be out
170	2230	3073	299	4.80	37.	12 41.616 N	87.35.573 W	
170	2240							Gun #12 back in
170	2300	3075	298	4.60	38	12 42.754 N	087.32.504 W	
170	23:30	3077	296	4.9	39.9	12° 44.029 N	087 39.625 W	
171	00:00	3080	294	4.5	41.0	12° 45.256 N	087 41.826 W	Guns 11 & 12 coming in ^{for} the
171	00:30	3082.24	204.1	3.90	46.3	12° 44.641 N	087° 43.665 W	started line 110
171	01:00	3084.21	203.4	3.90	53.5	12° 42.930 N	087° 44.634 W	
171	01:30	3086.31	205.1	4.00	59.1	12° 41.098 N	087° 45.612 W	
171	02:00	3088.27	199.6	3.70	63.9	12° 39.344 N	087° 46.532 W	
171	02:30	3090.17	200.1	3.80	68.1	12° 37.610 N	087° 47.446 W	
171	03:00	3092.22	202.8	4.10	73.3	12° 35.845 N	087° 48.419 W	
171	03:30	3094.21	204.5	3.80	75.5	12° 34.072 N	087° 49.354 W	
171	04:00	3096.21	201.7	3.90	76.8	12° 32.272 N	087° 50.297 W	
171	04:30	3098.21	204.4	4.00	79.6	12° 30.501 N	087° 51.248 W	
171	05:00	3100.18	205.4	3.70	79.7	12° 28.750 N	087° 52.183 W	
171	05:30	3102.17	202.0	4.10	80.0	12° 26.957 N	087° 53.140 W	
171	06:00	3104.07	199.5	4.10	84.6	12 25.190 N	087 54.037 W	
171	06:30	3106.09	204.7	3.90	94.1	12 23.432 N	087 55.013 W	Noise on NEAR TRACES
171	0700	3108.03	206.0	4.30	104.1	12 21.644 N	087 55.961 W	
171	0730	3110.04	202.2	3.90	113.3	12 19.818 N	087 56.926	
171	0800	3111.98	204.0	4.00	118.5	12 18.059 N	087 57.862 W	
171	0805					12 17.767 N	087 58.018 W	Gun 9 in
171	0806							Gun 9 back on

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
171	0818					12 17.011 N	087 58.415 W	Gun 9 in to fix float
171	0829							Gun 9 back in, Gun 6 out
171	0830	3113.94	201.9	3.90	123.4	12 16.279 N	087 58.806 W	
171	0832							Gun 7 out
171	0850					12 15.106 N	087 59.420 W	Gun 7 on
171	0900	3115.91	206.6	4.20	136.4	12 14.475 N	087 59.767 W	
171	0930	3118.09	203.6	4.30	213.0	12 12.503 N	088 00.820 W	
171	0939							Gun 7 out
171	0947							Gun 7 on
171	1000	3120.14	206.8	4.10	221.1	12 10.516 N	088 01.863 W	
171	1013							Gun 6 on
171	1030	3122.13	204.6	4.30	613.2	12 08.520 N	088 02.919 W	
171	1100	3124.17	201.6	4.20	916.4	12 06.504 N	088 04.607 W	
171	1130	3126.33	198.1	3.80	1126.3	12 04.490 N	088 05.070 W	
171	1200	3128.26	196	3.7	1294.3	12° 02.487' N	88° 06.135' W	
171	1230	3130.14	192	3.5	1501.3	12° 00.493' N	88° 07.179' W	
171	1300	3132.05	194	3.8	1774.3	11° 58.507' N	88° 08.245' W	Gun
171	1322							Gun 9 is on 4101' off
171	1330	3134.02	192	4.0	2055.2	11° 56' 41" N	88° 09' 35" W	Gun 410 is on
171	1337							
171	1400	3136	186	3.6	2416	11° 54' 35" N	88° 10' 46" W	
171	1430	3137.86	192	3.7	2784	11° 52.483' N	88° 11.430' W	
171	1500	3139.76	193	3.6	3246.1	11° 50.499' N	88° 12.493' W	
171	1530	3141.68	190	3.8	3466.1	11° 48.511' N	88° 13.537' W	Gun 7 off
	1532							Gun 7 is on
171	1600	3143.65	186	3.9	3859.1	11° 46.528' N	88° 14.595' W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
171	1630	3145.66	188	4.1	4419	11° 44.545' N	88° 15.647' W	
171	1700	3147.70	190	3.7	4702.0	11° 42.518' N	88° 16.719' W	
	1722					11° 40.990' N	88° 17.536' W	Start turn back to line
171	1730	3149.78	218	4.1	5068.9	11° 40.532' N	88° 17.939' W	Gun off - turning
171	1800	3151.73	4.1	4.30	5876.9	11° 41.245' N	88° 19.947' W	-
171	1830	3154.24	4.1	4.40	4773.	11° 43.316' N	88° 18.973' W	-
171	1900	3156.87	40.8	5.7	4353	11° 45.320' N	88° 17.723' W	-
171	1930	3159.63	110.1	5.5	3899.1	11° 46.541' N	88° 16.019' W	-
171	1953					11° 44.974' N	88° 15.454' W	Start shooting line NIC 110X
171	20:00	3162.14	185.7	4.10	4440.1	11° 44.563' N	88° 15.717' W	-
171	20:30	3164.14	190.2	4.50	4729.1	11° 42.352' N	88° 16.809' W	-
171	21:00	3166.53	190.5	4.90	5078.1	11° 40.232' N	88° 17.931' W	-
171	21:30	3168.75	189.3	4.50	5407.9	11° 38.040' N	88° 19.093' W	-
171	22:00	3170.88	188.8	4.20	5546.9	11° 35.970' N	88° 20.189' W	-
171	22:30	3173.08	189.8	4.8	5116.9	11° 33.887' N	88° 21.296' W	-
171	23:00	3175.38	192.6	4.5	4779.0	11° 31.760' N	88° 22.453' W	-
171	23:30	3177.5	189.9	4.60	4151.0	11° 29.517' N	88° 23.601' W	-
172	00:00	3180.07	187.6	4.40	3974.1	11° 27.311' N	088° 24.779' W	
172	00:30	3182.34	180.8	4.60	4111.0	11° 25.293' N	088° 25.854' W	00:36 COMPLETE NIC 110X
172	01:00	3184.65	87.8	4.30	3697.0	11° 23.592' N	088° 25.915' W	↑
172	01:30	3186.41	107.6	2.80	3778.1	11° 23.743' N	088° 24.842' W	RECOVERING S.M.F.M.M.
172	02:00	3188.12	76.5	3.40	4071.0	11° 23.888' N	088° 23.824' W	↓
172	02:30	3189.01	353.6	1.00	4107.0	11° 24.743' N	088° 23.885' W	
172	03:00	3189.57	43.5	0.90	4108.0	11° 25.619' N	088° 24.518' W	
172	03:30	3190.09	81.1	0.80	4103.0	11° 26.157' N	088° 24.739' W	
172	04:00	3190.67	21.6	1.30	4068.0	11° 26.819' N	088° 24.981' W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
172	04:30	3191.28	335.4	1.00	4017.0	11° 27.802 N	088° 25.585 W	- RECOVERING SMFAMFL -
172	05:00	3191.96	356.8	1.40	4034.0	11° 28.871 N	088° 26.238 W	
172	05:30	3192.63	349.3	1.10	4037.0	11° 29.930 N	088° 26.842 W	
172	06:00	3193.26	42.0	1.40	4089.0	11° 30.842 N	088° 27.156 W	
172	06:30	3193.89	60.1	1.20	4287.0	11 31.695 N	088 27.316 W	
172	06:45	3194.33	84.1	6.4	4368.0	11 32.108 N	088 27.233 W	SMFAMFL RECOVERED
172	07:00	3196.65	83.1	9.8	3196.58 4591.0	11 32.291 N	088 25.323 W	
172	07:30	3201.33	86.6	9.71	4933.0	11 32.749 N	088 20.741 W	
172	07:55	3205.40	61.5	9.50	5301.9	11 33.091 N	088 17.211 W	TURNING ONTO HS LINE (HS1-2)
172	08:00	3206.29	35.1	9.80	5456.9	11 33.729 N	088 16.536 W	
172	08:28					11 36.822 N	088 13.583 W	Turning complete, on HS Line
172	08:30	3211.14	119.7	10.0	5108.9	11 36.709 N	088 13.346 W	
172	09:00	3216.40	117.8	10.1	4905.0	11 34.219 N	088 09.408 W	
172	09:30	3221.26	120.1	10.2	5120.9	11 31.728 N	088 05.490 W	
172	10:00	3226.37	118.6	10.3	5139.9	11 29.256 N	088 01.591 W	
172	10:30	3231.40	118.0	10.1	5159.9	11 26.809 N	088 57.770 W	
172	11:00	3236.42	114.2	9.83	5091.9	11 26.362 N	087 53.697 W	
172	11:02	3236.99	52.0	9.90	4970	11 26.594 N	087 53.341 W	TURNING AT HS#3
172	11:17	3239.26	42.2	9.91	4698.0	11 28.077 N	087 51.609 W	FINISHED TURN HS#4 ^{11° 28' 07" N} _{087° 51' 09" W}
172	11:30	3241.52	50.9	10.2	4128.0	11 29.687 N	087 49.832 W	
172	12:00	3246.48	53	9.8	2763.2	11° 33.006' N	87° 46.157' W	
172	12:30	3251.30	102	9.8	2123.2	10° 33.519' N	87° 41.836' W	
172	13:00	3256.27	100	9.8	1801.2	11° 32.711' N	87° 37.241' W	
172	13:30	3261.23	103.4	10.0	1583.3	11° 31' 87.9' N	87° 32' 55.6' W	
172	14:00	3266.29	98.3	10.2	1287.3	11° 31' 07.3' N	87° 27' 9.9' W	
172	14:30	3271.29	101	10.1	926.4	11° 30.285' N	87° 23.529' W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
172	1500	3276.29	97	10	676.4	11°29.469'N	87°18.944'W	
172	1530	3279.91	99	1.4	578.0	11°28.827'N	87°15.880'W	
172	1536	3280.16	120	1.6	506.4	11°28.874'N	87°15.741'W	Launched OBH #29
172	1600	3283.49	131	10.4	599.0	11°26.529'N	87°13.937'W	
172	1630	3288.34	119	4.9	661.7	11°25.334'N	87°10.799'W	Many 1/5 Anter Beam Errors
172	1640	3288.96	080	1.2	616.6	11°23.408'N	87°10.419'W	Launched OBH #30
172	1700	3291.4	130.0	9.2	675.8	11°22.672'N	87°09.098'W	
172	1730	3296.6	124.8	9.0	615.5	11°18.142'N	87°05.793'W	
172	1742	3297.70	169	1.0	601.5	11°17.907'N	87°05.142'W	Launched OBH #31
172	1800	3300.09	133	9.7	602	11°16.155'N	87°03.905'W	
172	18:30	3304.9	131	10.3	0.	11°12.862'N	87°00.660'W	
172	18:43	3306.35	184.6	1.57	500.4	11°12.450'N	086°59.764'W	Launched OBH #32
172	19:00	3308.58	132.2	10.	~500.	11°10.739	086°58.603	
172	19:30	3313.6	130.0	10.2	~600	11°07.347	086°55.356'W	
173	19:45	3315.	88.9	1.6	~530	11°06.958'N	086°54.465'W	Launched OBH #33
173	20:00	3316	129.1	9.92	733.5	11°05.729'N	086°53.709'W	
173	20:30	3321.73	133.1	10.0	573.9	11°02.816'N	086°50.384'W	
173	20:48	3323.24	184	0.6	686.5	11°01.456'N	086°49.133'W	Launched OBH #34
173	21:00	3324.99	128.	10.2	638.2	11°00.441'N	086°48.559'W	
173	21:30	3330.12	132.4	10.0	767.4	10°56.947	086°45.219'W	
173	21:52	3332.38	163	2.31	685.4	10°55.946'N	086°43.800'W	Launched OBH #35
173	22:00	3333.04	135.1	9.80	853.4	10°55.439'N	86°43.410'W	-
173	22:30	3332.91	134	9.9	509.5	10°52.030'N	086°40.435'W	
173	22:54	3340.85	115.	0.61	785.9	10°50.535'N	086°38.511'W	Launched OBH #36
							506'W	
173	23:00	3341.36	132.9	9.60	568.6	10°50.160'N	086°38.163'W	-

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
173	23:30	3346.06	136.	9.91	512.7	10° 46.764 N	086° 35.131 W	- 01
173	23:54	3348.97	135	0.90	640.6	10° 45.001	086° 33.237	Launched OBH #37
173	00:00	3349.29	129.5	7.40	498.0	10° 44.740 N	086° 33.002	
173	00:30	3354.20	139.5	10.0	455.3	10° 41.253 N	086° 29.682 W	
173	00:56	3356.70	121.5	0.60	450.3	10° 39.516 N	086° 27.911 W	OBH #38 launched
173	01:00	3556.85	136.5	5.22	450.2	10° 39.434 N	086° 27.813 W	
173	01:30	3361.47	141.8	10.1	456.2	10° 35.939 N	086° 24.611 W	
173	01:56	3364.30	308.1	1.00	477.0	10° 34.067 N	086° 22.621 W	OBH #39 launched
173	02:00	3364.41	77.4	1.30	468.2	10° 34.168 N	086° 22.619 W	
173	02:30	3368.75	132.5	10.5	703.9	10° 30.861 N	086° 19.956 W	
173	02:59	3372.36	216.2	0.40	919.5	10° 28.475 N	086° 17.322 W	OBH #40 launched
173	03:00	3372.38	159.7	0.90	919.4	10° 28.484 N	086° 17.321 W	
173	03:30	3377.22	139.1	10.7	689.4	10° 24.896 N	086° 14.164 W	
173	03:55	3380.19	105.1	1.12	444.5	10° 23.037 N	086° 12.037 W	OBH #41 launched
173	04:00	3380.29	352.6	1.82	435.5	10° 23.153 N	086° 11.918 W	Deploying streamer
173	04:30	3382.32	9.3	4.52	322.0	10° 25.390 N	086° 11.837 W	
173	05:00	3384.57	12.0	4.62	229.5	10° 27.669 N	086° 11.263 W	
173	05:30	3386.81	14.4	4.42	180.7	10° 29.863 N	086° 10.560 W	
173	06:00	3389.06	30.3	4.82	126.0	10° 31.928 N	086° 09.541 W	
173	06:30	3391.26	214.4	3.92	139.0	10 33.381 N	086 09.875 W	
173	07:00	3393.39	158.2	4.42	136.7	10 31.354 N	086 09.830 W	
173	07:30	3395.59	153.0	4.42	137.6	10 29.132 N	086 09.213 W	
173	08:00	3397.82	160.9	4.62	131.6	10 26.991 N	086 08.603 W	
173	08:30	3400.2	157.1	4.62	127.3	10 24.622 N	086 07.986 W	
173	09:00	3402.47	153.3	4.82	119.9	10 22.378 N	086 07.135 W	
173	09:30	3404.69	155.7	3.62	121.3	10 20.390 N	086 06.300 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
173	1000	3406.99	239.7	5.22	277.9	10 18.186 N	086 06.268 W	
173	1019					10 18.456 N	086 07.619 W	On line 125H shooting
173	1030	3409.20	312.3	3.82	321.0	10 19.006 N	086 08.155 W	Guns: 1-8, 13-16, 18-20
173	1035					10 19.242 N	086 08.411 W	Guns 11+12 on
173	1100	3411.07	301.9	3.62	358.7	10 20.412 N	086 09.524 W	all guns on
173	1130	3412.94	304.5	4.02	404.8	10 21.877 N	086 10.933 W	
173	1200	3414.88	306	4.1	579.9	10° 23.297' N	86° 12.311' W	
173	1230	3416.83	303	4.0	569.9	10° 24.744' N	86° 13.716' W	
173	1300	3418.83	303	3.8	728.9	10° 26.189' N	86° 15.114' W	
173	1330	3420.81	311.3	4.22	833.2	10° 27' 680 N	86° 16' 554 W	
173	1400	3422.69	308.0	4.22	917.4	10° 29' 057 N	86° 17' 886 W	
173	1430	3424.72	300	4.3	767.4	10° 30.505' N	86° 19.276' W	
173	1500	3426.69	306	4.0	557.0	10° 32.005' N	86° 20.720' W	
173	1530	3428.58	304	3.6	493.2	10° 33.470' N	86° 22.139' W	
173	1600	3430.38	308.5	3.32	458.9	10° 34' 921 N	86° 23' 529 W	
173	1630	3432.29	315.5	3.62	452.3	10° 36' 442 N	86° 25' 025 W	
173	1700	3434.16	314	3.6	453.6	10° 37.974	86° 26.488	
173	1730	3435.87	314	3.32	453.9	10° 39' 496 N	86° 27' 962 W	
173	1800	3437.58	312	3.1	448.9	10° 41.033' N	86° 29.426' W	
173	1830	3439.15	315.2	3.32	484.5	10° 42.578 N	86° 30.938' W	-
173	1900	3440.73	316.1	3.42	572.5	10° 44.120 N	86° 32.406 W	
173	1930	3442.34	315.7	3.22	494.5	10° 45.643 N	86° 33.896 W	- sp
173	1948	3443.43	309.1	3.32	511	10° 44.599 N	86° 34.803 W	speeded to 4.4 kts
173	2000	3444.1	310.2	2.82	508.2	10° 47.220 N	86° 35.430 W	-
173	2030	3445.63	314.8	3.02	436.0	10° 48.790 N	86° 36.934 W	-
173	2100	3447.25	301.7	3.02	523.1	10° 50.361 N	86° 38.433 W	-

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
173	21:30	3448	314.8	3.32	3449	10° 52.001 N	086° 40.041 W	19 pulled
173	21:48		312.8		611.4	10° 52.913 N	086° 40.974 W	Gun 14, 15 out 21:48
173	22:00	3450.65	315.5	3.52	612.5	10° 53.543 N	86° 41.528 W	—
								Gun 19 back 22:07
173	22:18		.	.	.	10° 54.514 N	86° 42.458 W	Gun 14, 15 back
173	22:30	3452.41	311.1	3.72	847.0	10° 55.184 N	86° 43.106 W	—
173	23:00	3454.18	318.3	3.22	798.4	10° 56.791 N	86° 44.657 W	—
173	23:30	3455.85	312.5	3.42	816.4	10° 58.366 N	86° 46.174 W	
173	00:00	3457.5	322	3.22	735.4	10° 59.910 N	86° 47.691 W	
174	00:30	3459.23	312.3	3.32	620.3	11° 01.532 N	086° 49.258 W	
174	01:00	3460.91	326.1	3.72	539.3	11° 03.097 N	086° 50.764 W	
174	01:30	3462.65	320.2	3.32	637.8	11° 04.692 N	086° 52.305 W	
174	02:00	3464.42	322.5	3.62	547.7	11° 06.295 N	086° 53.854 W	
174	02:30	3466.20	328.6	3.12	537.4	11° 07.897 N	086° 55.413 W	
174	03:00	3468.00	329.0	4.02	482.5	11° 09.517 N	086° 56.966 W	
174	03:30	3469.81	323.0	3.62	487.0	11° 11.109 N	086° 58.510 W	
174	04:00	3471.63	320.3	4.12	540.9	11° 12.676 N	087° 00.014 W	
174	04:30	3473.51	322.8	3.92	577.7	11° 14.287 N	087° 01.574 W	
174	05:00	3475.46	325.4	4.32	570.2	11° 15.883 N	087° 03.120 W	
174	05:30	3477.50	322.6	3.92	592.3	11° 17.470 N	087° 04.679 W	
174	06:00	3479.57	330.4	4.22	603.3	11° 19.066 N	087° 06.216 W	
174	06:30	3481.63	329.7	4.22	629.5	11 20.640 N	087 07.737 W	
174	07:00	3483.72	328.1	4.02	666.9	11 22.227 N	087 09.269 W	
174	07:30	3485.80	329.0	3.82	622.2	11 23.820 N	087 10.806 W	
174	08:00	3487.90	324.1	4.12	586.0	11 25.383 N	087 12.333 W	
174	08:30	3490.00	325.4	4.32	529.2	11 26.984 N	087 13.879 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
174	0900	3492.09	328.0	4.42	496.7	11 28.569 N	087 15.402 W	
174	0930	3494.23	320.3	4.42	515.5	11 30.156 N	087 16.944 W	
174	1000	3496.36	323.1	4.02	536.4	11 31.729 N	087 18.471 W	
174	1018	3497.67	318.4	4.62	592.1	11 32.619 N	087 19.343 W	GUNS 11 + 12 out, starting
174	1029					11 33.075 N	087 20.066 W	guns 13, 14, 16, 18, + 20 off
174	1030	3498.45	274.0	4.82	836.1	11 33.082 N	087 20.124 W	End line 125H
174	1046					11 32.849 N	087 20.998 W	Begin line 125C, all ports side
174	1100	3500.89	215.7	4.12	814.4	11 31.739 N	087 22.147 W	
174	1130	3502.74	214.5	3.92	754.4	11 29.964 N	087 23.863 W	
174	1200	3504.95	213	4.3	1137.3	11° 28.201' N	87° 25.613' W	
174	1210				1238	11° 27.566' N	87° 26.239' W	Stop shooting to clean DOP
	1226							Start line 125D
174	1230	3507.07	212	4.0	1337.3	11° 26.451' N	87° 27.333' W	On line 125D
174	1300	3509.13	212	4.2	1807.3	11° 24.716' N	87° 29.041' W	
174	1330	3511.07	203.0	4.5	2460.8	11° 23' 031 N	87° 30' 681 W	
	1332							All guns except 11, 12, are OK
174	1400	3513.2	203.8	4.3	3243.1	11° 21' 313 N	87° 32' 400 W	
174	1430	3515.	199	4.2	3665.1	11° 19.528' N	87° 34.148' W	
174	1500	3517.74	125	5.4	3913.1	11° 17.667' N	87° 34.492' W	On line 115
174	1530	3520.42	118	5.2	3963.1	11° 16.351' N	87° 32.866' W	
174	1600	3523.13	122	5.5	4079.0	11° 15.012' N	87° 31.241' W	
174	1630	3525.90	117	5.9	4064.0	11° 13.582' N	87° 29.508' W	
174	1700	3528.74	115.0	5.02	4148.0	11° 12' 074 N	87° 27' 894 W	
174	1730	3531.63	119	5.3	4114	11° 10.607' N	87° 25.922' W	
174	1800	3534.3	114	5.6	4115	11° 09.123	87 24.141 W	
174	1830	3536	115	5.32	4017	11° 07.718 N	87° 23.428 W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
174	19:00	3538.5	117.6	5.42	3962.1	11° 06.254	087° 20.742W	Boat Traffic
174	19:30	3542	117.5	5.12	3880	11° 04.676 N	087° 19.099W	
174	20:00	3544	120.2	5.52	3850.1	11° 03.116 N	087° 17.476W	
174	20:30	3547	119	5.32	3858	11° 01.534 N	087° 15.818W	Chalk Rec 98/
174	21:00	3550	122.9	5.32	3817	10° 59.999N	087° 14.219 W	Missing shots 1065, 1061, 1091 1027
174	21:30	3552.92	123.2	5.32	3815.1	10° 58.483N	087° 12.588W	
174	22:00	3555.60	124	5.62	3661	10° 56.865N	087° 10.957 W	—
174	22:30	3558.25	126.7	5.32	36191	10° 55.311 N	087° 09.337W	—
174	23:00	3560.74	127.2	5.22	3819.1	10° 53.785N	087° 07.739W	
174	23:30	3563.32	125.5	5.32	3893.1	10° 52.212 N	087° 06.103W	
175	00:00	3566.08	124.5	5.22	3866.1	10° 50.623N	087° 04.427W	
175	00:30	3568.66	121.5	5.25	3850.1	10° 49.087 N	087° 02.786W	
175	01:00	3571.22	120.2	5.42	3834.1	10° 47.561N	087° 01.143 W	
175	01:30	3573.85	124.3	5.42	3850.1	10° 46.029 N	086° 59.506 W	
175	01:42	3574.88	—	—	—	10° 45.397 N	086° 58.836 W	will alter course 10° to starboard to avoid
175	02:00	3576.18	133.2	4.32	3749.1	10° 44.444 N	086° 58.173 W	Fishermen will also slow down to 4 knots
175	02:30	3578.70	124.9	5.02	3750.1	10° 42.959 N	086° 56.766 W	
175	03:00	3581.25	118.1	5.72	3651.1	10° 41.742N	086° 55.028W	
175	03:30	3583.93	128.0	5.72	3589.1	10° 40.264 N	086° 53.338W	
175	04:00	3586.68	135.1	5.22	3481.1	10° 38.684 N	086° 51.645 W	
175	04:30	3589.32	141.5	5.72	3390.1	10° 36.970 N	086° 50.252 W	
175	05:00	3592.00	140.7	5.22	3368.1	10° 35.201 N	086° 48.843 W	
175	05:30	3594.63	140.8	5.32	3472.1	10° 33.446 N	086° 47.442 W	
175	06:00	3597.23	146.0	4.92	3633.1	10° 31.670 N	086° 46.635 W	
175	06:30	3599.76	148.5	5.32	3427.1	10 29.923 N	086 44.627W	
	07:00	3602.17	135.7	4.22	3769.1	10 28.190 N	086 43.249W	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
175	0730	3604.27	136.5	4.22	3679.1	10 26.413 N	086 41.827 W	
175	0800	3606.48	150.1	5.62	3690.1	10 24.678 N	086 40.440 W	
175	0830	3609.16	142.4	5.32	3655.1	10 22.917 N	086 39.044 W	
175	0900	3611.49	136.7	4.22	3637.1	10 21.163 N	086 37.638 W	
175	0930	3613.55	137.5	4.12	3626.1	10 19.400 N	086 36.234 W	
175	1000	3615.65	138.2	3.92	3675.1	10 17.594 N	086 34.797 W	
175	1030	3617.79	142.3	5.02	3716.1	10 15.794 N	086 33.350 W	
175	1100	3619.77	130.8	4.82	362.1	10 14.052 N	086 31.950 W	
175	1130	3622.24	147.0	5.22	3619.1	10 12.282 N	086 30.543 W	
175	1200	3625.01	142	5.7	3646.1	10° 10' 52.6" N	86° 29.146 W	
175	1230	3627.63	141.3	5.2	3562.1	10° 08' 73.1" N	86° 27' 70.5" W	
175	1300	3630.25	140	5.3	3616.1	10° 06' 980" N	86° 26' 328" W	
175	1330	3632.75	146.2	5.3	3576.1	10° 05' 248" N	86° 24' 927" W	
175	1400	3635.54	142.9	5.22	3586.1	10° 03' 445" N	86° 23' 488" W	
175	1430	3638.25	147	5.3	3569.1	10° 01' 717" N	86° 22.113" W	
175	1500	3640.8	151.4	5.22	3593.1	09° 59' 940" N	86° 20' 711" W	
175	1507					9° 59' 460" N	86° 20.334" W	End of line 115
175	1511							Maggie off
175	1530	3643.37	62	3.8	3443.1	9° 58' 824" N	86° 18.899" W	
175	1600	3645.17	35	3.5	2920.2	10° 00.671" N	86° 17.571" W	
175	1630	3647.17	038	4.4	2565.2	10° 02' 672" N	86° 16.170" W	
175	1700	3648.19	16.5	1.22	2411.2	10° 03' 925" N	86° 15' 401" W	
175	1730	3648.75	357	0.9	2358.2	10° 04' 812" N	86° 15.362" W	
175	1800	3649.04	356.5	1.42	2363.2	10° 05' 090" N	86° 15' 440" W	
175	1830	3649.44	291.9	0.52	2360.2	10° 05' 925" N	86° 15.779" W	-
175	1900	3650.02	20.8	2.62	2347.2	10° 06' 72" N	86° 15.833" W	-

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	LON	REMARKS
175	19:30	3651.70	147.1	2.02	220.3	10° 05.920 N	86° 14.596 W	-
175	20:00	3652.65	140.0	2.02	2195.5	10° 05.326 N	86° 14.190 W	-
175	20:30	3654.3	73.7	10.0	2100	10° 04.917 N	086° 12.940 W	
175	21:00	3659.55	355	10.5	1469.3	10° 09.254 N	086° 11.576 W	
175	21:30	3665.02	355.6	10.7	1129.3	10° 15.121 N	086° 11.848 W	
175	22:00	3670.31	357.3	10.4	552.8	10° 20.844 N	086° 12.037 W	
175	22:24	3672.51			446.4	10° 23.162 N	86° 12.030 W	OBH 41 recovered
175	22:30	3672.71	313.3	5.00	456.4	10° 23.402 N	86° 11.936 W	
175	23:00	3677.72	301.9	10.5	845.4	10° 26.919 N	86° 15.929 W	
175	23:30	3680.	30.4	3.72	934	10° 28.455	086° 17.549 W	
175	23:39	3680.42	191.5	0.72	630.4	10° 28.765 N	086° 17.365 W	OBH 40 recovered
176	00:00	3682.68	302.9	10.0	691.4	10° 30.551 N	086° 18.991 W	
176	00:30	3687.22	319.1	6.72	521.6	10° 33.662 N	086° 22.690 W	
176	00:42	3687.80	191.2	0.62	467.4	10° 34.235 N	086° 22.707 W	OBH 39 recovered
176	01:00	3689.48	298.3	10.1	402.0	10° 35.218 N	086° 22.722 W	
176	01:30	3694.66	307.0	10.2	470.6	10° 38.429 N	086° 27.330 W	
176	01:55	3696.18	240.1	1.10	455.3	10° 39.698 N	086° 28.213 W	OBH 38 recovered
176	02:00	3696.30	239.0	1.70	464.0	10° 39.671 N	086° 28.326 W	
176	02:30	3699.68	317.0	10.9	472.2	10° 42.086 N	086° 30.774 W	
176	03:00	3703.36	159.0	6.61	594.0	10° 45.119 N	086° 33.406 W	
176	03:01	3703.38	195.0	1.41	596.5	10° 45.126 N	086° 33.415 W	OBH 37 recovered
176	03:30	3706.24	316.6	10.2	546.0	10° 47.078 N	086° 35.670 W	
176	04:00	3710.46	13.9	2.21	451.3	10° 50.592 N	086° 38.792 W	
176	04:06	3710.61	208.7	2.01	443.7	10° 50.665 N	086° 38.781 W	OBH 36 recovered
176	04:30	3712.11	316.0	11.0	489.4	10° 51.504 N	086° 40.061 N	
176	05:00	3717.35	315.4	8.40	708.4	10° 55.902 N	086° 43.977 N	

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J-DAY	TIME	PIT LOG	CSE	SPD	DEPTH	LAT	Lon	REMARKS
176	05:13	3718.08	201.4	1.50	709.5	10° 56.037' N	086° 44.024' W	OBH 35 recovered
176	05:30	3718.67	316.0	8.00	808.5	10° 56.141' N	086° 44.616' W	
176	0600	3723.80	314.3	10.8	830.4	11 06.518' N	086 48.538' W	
176	0605	3725.63	808.4	1.5	595.9	11 01.552' N	086 49.485' W	OBH 34 recovered
176	0630	3725.72	245.5	0.9	591.3	11 01.545' N	086 49.617' W	
176	0700	3728.88	819.5	10.6	584.0	11 03.941' N	086 52.206' W	
176	0730	3733.07	134.0	3.54	546.9	11 07.088' N	086 54.639' W	
176	0735	3733.22	230.8	1.34	557.1	11 07.021' N	086 54.681' W	OBH 33 recovered
176	0800	3734.82	320.5	10.3	733.1	11 08.053' N	086 56.191' W	
176	0830	3739.99	328.2	5.60	578.0	11 12.290' N	086 59.978	
176	0842	3740.40	212.0	1.00	567.5	11 12.466' N	087 00.042' W	OBH 32 recovered
176	0900	3741.19	300.0	10.4	604.2	11 12.674' N	087 01.009' W	
176	0930	3746.53	321.0	10.7	601.4	11 17.164' N	087 04.804' W	
176	0946	3747.94	180.5	0.80	611.2	11 17.944' N	087 05.298' W	OBH 31 recovered
176	1000	3748.14	224.3	1.50	621.5	11 17.949' N	087 05.603' W	
176	1030	3752.76	313.9	10.4	710.6	11 21.448' N	087 09.450' W	
176	1054	3755.46	124.5	0.61	639.7	11 23.408' N	087 10.615' W	OBH 30 recovered
176	1100	3755.53	265.3	6.81	655.7	11 23.391' N	087 10.746' W	
176	1130	3759.68	315.9	10.8	621.3	11 26.320' N	087 14.091' W	
176	1157	3763.20	126.9	0.73	580.3	11 28.911' N	087 15.934' W	OBH 29 recovered - last one!!!
176	1200	3763.23	180.8	0.53	526.2	11 28.899' N	087 15.972' W	last watch over!!!!
176	1230	3765.81	182	11.2	724.5	11° 26.641' N	87° 16.959' W	
176	1300	3771.11	183	10.8	1074.3	11° 21.407' N	87° 18.071' W	
176	1330	3774.14	51.3	11.18	1346	11° 18' 762' N	87° 18' 457' W	
176	1400	3774.	55	1.39	1276.3	11° 19.459' N	87° 18.800' W	Paying out wire
176	1430	3775.76	52.6	1.52	1205.3	11° 20° 203' N	87° 18' 171' W	

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