NEECHO 82-5 ~~#82021~~
82021109

July 1 1982

Initial Instrument Settings

<u>Magnetometer</u> 1/2" per minute 1/4 ?
6 sec / cycle
1000 to 100 γ scales

<u>Side Scan</u> 200 m range
≈ 1"/minute paper speed

<u>Unibroom</u> 0-100 fms or 1/4 sec sweep

~ 500 – 1000 cps
+1/2 wave

with TVG <u>on</u> "spreading" ?400 ?~~700~~ ~~150~~ db/sec ?

~50 db on amps 6.40 on EPC gain

mostly 200 J

check contast, threshold

≈ 3 1/2" / 5 minutes paper speed

July 7

7–8 setting up magnetometer

Geometrics G-801 M
~100 m aft

paper speed 1"/min
scales blue 100 γ red 1000 γ

zero and calibrate red pen reading 10 γ high

~9 putting in uniboom towed of stb quarter

9 30 uniboom operating

towing uniboom a little below surface – top of pontoons just breaking surface

Innerspace Techology Inc
preamplifier/filter model 202

impedance 250
set at 500-300~

10 40 getting side-scan ready

EG&G Uniboom Energy Source model 234

EPC graphic recorder
1/4 sec sweep 1:4 of 1

10 50 start side-scan

+ 1/2 wave

uniboom keeps tripping circuit breaker
no signal on side scan

11 24 pull in fish – side-scan to check

11 35 change to 1:8 hey uniboom because of circuit breaker problem

all times to 12 30 are 1 minute fast

12 36 c/c 225°

14 25 frequent miskeying

15 54 slow to pull gear end of data collection

Side-Scan triggering out-of-sync

END OF UNIBOOM ROLL #1

July 8

Try other EPC recorder for Uniboom to see if we can eliminate keying difficulties

Fire and AC power failure due to loss of hydraulic fluid Caused damage to magnetometer recorder

Borrowed single channel TI recorder from Instrumentation Center

July 9

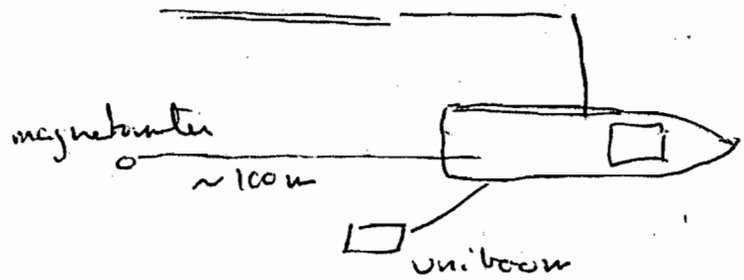
Change to second EPC recorder for uniboom.
Keying with EPC Key/Gate – TVG unit

Now using Varian V-75 proton magnetometer
100 + 1000 γ scales
paper speed 1/4 inch/minute

with HP model 7128A strip chart recorder
with model 17500A amps/alternators

7:15 leaving New Castle

Aquadyne array – elements, ~ 6" spacing



9:20 Varian Magnetometer reads ~ 1000 γ low
Replace with Geometrics
now recorder pens not writing

Calibration	1000 gammas	0–99 divisions

~10 using 1 sec rep rate to keep Uniboom from tripping circuit breakers

Problem – gives poor record at high paper speed
Solution – try 1/2 sec?

10:21 use A delayed by B ps 100
1/4 1/2

11:00 fooling with side-scan : not transmitting?
receives uniboom ok

14 – lots of trouble with pens on HP recorder

9 July

Tug 200-1000 ~ in ~ 100 ft water

1-45 — End of data collection

10 July

8 25 magnetometer and uniboom + away in water
still having trouble with magnetometer pen
magnetometer only ~ 200 ft aft too close?

10 20 shut down uniboom to change belts

10 38 " " " " " "

~12 punch hole in side of ink cartridge ~~for~~ to allow ~~preventing~~ pressure to equalize — seems to help

14 30 magnetics 56000 ±

14 50 slow to pull gear
End of data collection

11 July

8 43 start data collection
magnetics and uniboom — both on roll #2
magnetics 1000 γ 0-99 chart divisions

10 20 uniboom misfiring a little — EPC belt?

12 00 End Uniboom Roll #2, Start Roll #3

13 46 Turn off Uniboom to test for interference with magnetometer
Uniboom Causes Spikes on Magnetic Record

11 July cont'd

~15^30 End of magnetics – Pen failed again ~~for good~~

15^42 magnetometer back on

16^12 magnetometer off

16^16 uniboom off

End of Data

12 July No cruise – poor weather and need for work on magnetometer recorder and side-scan. No side-scan signal apparently caused by no trigger because of dirty LED!

13 July 7^50 waiting for fog to lift

8^01 magnetometer reading ~~10γ~~ low
also can not run any paper speed > 1/4 inch/min

10^02 uniboom is towing with pontoons breaking surface
magnetometer farther aft. – still noisy

magnetometer paper feeding very poorly – wrinkle & torn

12^20 reflector ~200 ft below surface 200 – 1500 ~

For penetration in fill use min threshold
max contrast
enough gain
200 – 1500 ~

15^51 End of data

14 July 1982

8:04 start data collection w. magnetometer + uniboom

14:28 End uniboom roll #3

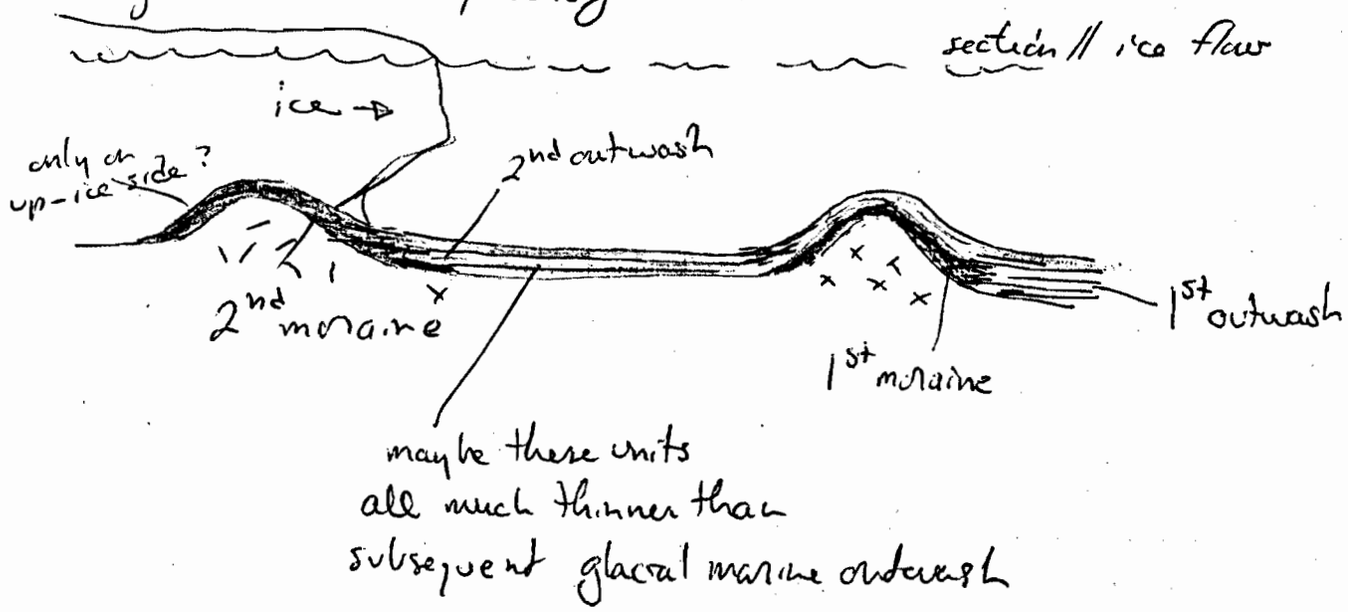
14:34 Start uniboom roll #4

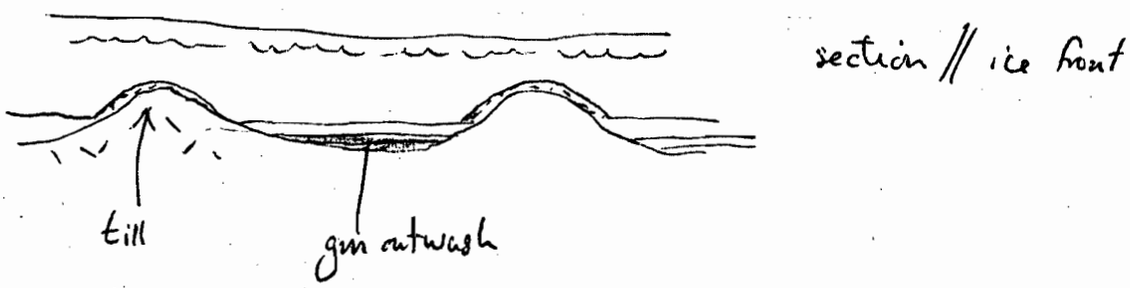
15:40 End of data collection

15 July

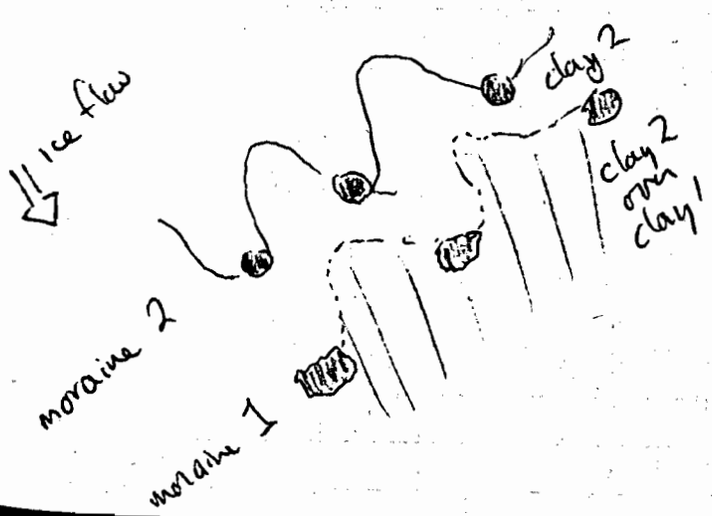
8:12 start data collection: uniboom + magnetometer

8:45 magnetometer very noisy





map



15 ~~15~~ JULY 1982 cont'd

1236 Side-scan trouble may be wire broken where cable goes into instrument!

1407 small whitecaps – following sea – has been very calm except for 1st day

1516 Change to Texas Instruments recorder for magnetometer for higher paper speed

Doesn't work – go back to HP recorder 1/4"/min

1615 End of data collection.

16 July

734 start data collection; uniboom and magnetometer

using 1"/min on magnetometer recorder cured gear slippage by wedging speed lever with plastic picnic knife

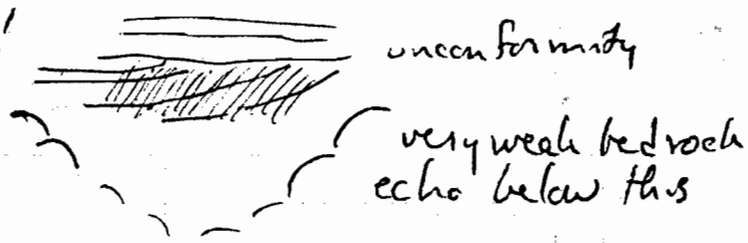
End magnetometer roll #2

810 Start magnetometer roll #3

901 change to 1/4"/min for magnetometer record

1155 going back to repeat profile over thick hill mass (?)

No – maybe is gas!



1625 end of data collection

end of uniboom roll #4

18 July

35 start data collection uniboom + magnetometer
start uniboom roll #5
2-3 foot waves causing very noisy records

rep rate 40 per 30 seconds or $\frac{4}{3}$ per second

or $\frac{3}{4}$ sec

sweep A $\frac{1}{4}$ sec sweep on paper
sweep B 1/2 sec

trigger A delayed by B gives 3/4 sec

16 20 End data collection

19 July 1982

Today we'll zig-zag down coast so we can trace magnetic anomalies onto shore

Array 20 Aquadyne AQ-1 hydrophones at 6" spacing

7 40 start data collection uniboom + magnetometer
magnetometer only about 150' aft — on surface

Taking fixes at start and end of each zig-zag

14 05 End of data collection for project

JAB

7 JULY 1982

Time	ID	ID	LAT	LONG	REMARKS
~7:30 AM					Magnetometer in water
7:35			43° 00.67'	70° 42.15'	
7:40			00.44'	42.31'	todays symbol
7:45			00.19'	42.61'	
7:50			42° 59.99'	70° 42.99'	
7:55			59.82'	43.35'	
8:00			59.55'	43.65'	
8:08			59.16'	43.98'	
8:10			59.06'	44.08'	
8:15			58.79'	44.36'	
8:20			58.49'	44.59'	
8:25			58.18'	44.75'	
8:30			57.81	44.90'	
8:35			57.49	45.05'	
8:40			57.21'	45.23'	
8:42' 30"			making turn change course to 135.		
8:43			57.08	45.29'	
:45			57.04'	45.12'	
:49 30"			slowing to put in uniboom.		
:50			56.86'	44.61'	
:55			56.86'	44.61'	back up to speed
9:01			56.55	4391	slow down

7 July 1982

TIME	LAT	LONG	REMARKS
9:03 30"			~~still slow~~ speeding again
:05		43.66'	
	56.44'		
9:10	42° 56.25'	70° 43.32'	speed at 3.8
:15	56.07'	42.95'	
:20	55.93'	42.57'	
:25	55.79'	42.18'	
:30	55.62'	41.72'	
:35	55.49'	41.32'	
:40	55.35'	40.94'	
:45	55.21'	40.55'	
:50	55.06'	40.16'	
:55	54.91'	39.78'	increase speed to 4.3
10:00	54.73'	39.36'	
:05	54.57'	39.04'	
:10	54.37'	38.64'	
:15	54.19'	38.22'	
:20	53.99'	37.82'	
:25	53.81'	37.42'	
:30	53.60'	36.94'	
:35	53.43'	36.51'	
:40	53.27'	36.08'	
:45	53.11'	35.66'	
:50	52.96'	35.23'	
:55	52.81	34.79'	
11:00	52.69'	34.46'	
:05	52.54'	34.07'	
:10	52.39'	33.66'	
:15	52.23'	33.27'	slow to 3.8
:20	52.08'	32.90'	
:25	51.92'	32.49'	
:30	51.73'	32.04'	
:35	51.58'	31.66'	
:40	51.41'	31.27'	
:45	51.27'	30.90'	
:50	51.15'	30.50'	
:55	51.04'	30.19'	
12:00	50.90'	29.81'	
:05	50.70'	29.50'	
:10	50.49'	29.16'	

7 July 1982

Time	LAT	LONG	REMARKS
12:15	50.37'	28.77'	(directions from Mag. N.)
12:20	50.25'	28.35'	turn to N45E here
:25	50.46'	28.10'	
:30	50.82'	28.02'	
:35	51.14'	27.92'	start turn to N 315 here (N45W)
:40	51.42'	28.00'	
:45	51.62'	28.38'	turn completed
:50	51.78'	28.78'	correcting for turn
:55	51.93'	29.19'	
1:00	52.06'	29.62'	speed check = 4.0
:05	52.16'	30.05'	
:10	52.23'	30.51'	
:15	52.36'	30.95'	
:20	52.52'	31.35'	
:25	52.73	31.73	
:30	52.98'	32.21'	
:35	53.14'	32.51'	
:40	53.36	32.94	
:45	53.54'	33.30'	
:50	53.73'	33.71'	
:55	53.92	34.16'	
2:00	54.09	34.65	
:05	54.19	34.99	
:10	54.33	35.43	
:15	54.44	35.89	
:20	54.58	36.35	
:25	54.71'	36.78'	
:30	54.88'	37.21'	
:35	55.07'	37.64'	
:40	55.25'	38.06'	
:45	55.45	38.46	
:50	55.68'	38.96'	
:55	55.83'	39.26'	
3:00	55.98'	39.58'	
:05	56.19'	40.04'	
:10	56.35'	40.43'	
:15	56.50'	40.82'	
:20	56.65'	41.23'	

7 July 82

TIME	LAT	LONG	REMARKS
:25	56.81'	41.82	
:30	56.97	42.01	
:35	57.14	42.41	
:40	57.28	42.79	
:45	57.43	43.18	
:50	57.58	43.58	pulling side-scan, unitron

:30 56.65' 41.—'

9 July 1982

Time	LAT	LONG	REMARKS
8:25	42° 57.52'	70° 45.02'	Just put magi & oni boom in water
8:30	57.16'	45.11'	
8:43	56.37'	45.74'	speed ~4.1
8:48'30"	56.02'	45.77'	start of line magi recorder not working speed 4.3
:50	55.97'	45.60'	
:55	55.81'	45.18'	
9:00	55.63	44.83	todays symbol = ⊗
9:05	55.40'	44.33'	
:10	55.25'	43.98'	
:15	55.04'	43.49'	
:20	54.85	43.04	
:25	54.71'	42.59'	
:30	54.54	42.16	
:35	54.38	41.71	magnetics on at 9:34 marked by an "M" on the chart
:40	54.20	41.26	
:45	54.01	40.85	
:50	53:80	40:39	
:55	53.64'	39.99	
10:00	53.47'	39.54'	
:05	53.29	39.10	
:10	53.11	38.64	
:15	52.91	38.20	
:20	52.72	37.78	
:25	52.53	37.37	
:30	52.35	36.97	
:35	52.15	36.55	
:40	51.96	36.15	
:45			missed it.
:50	51.61	35.31	side scan in & run
:55	51.41	34.77	
11:00	51.31	34.45	
:05	51.15	34.00	
:10	50.99	33.56	
:15	50.83	33.12	

9 July 1982

TIME	LAT	LONG	REMARKS
11:20	42° 50.68'	70° 32.65'	
:25	50.54'	32.22'	
:30	50.39	31.76	
:35	50.20	31.33	
:40	50.00	30.90	
:45	49.78	30.49	
:50	49.56	30.08	
:55	49.38	29.63	
12:00	49.19	29.23	
12:05	49.02	28.77	← {started at this pt. to turn to N220. Turn completed at 12:14.
:10	48.72	28.75	
:15	48.50	29.11	
:20	48.23	29.46	← {started second turn to N315 here. Turn completed at 12:24
:25	48.23	29.84	
:30	48.38	30.18	
:35	48.59	30.60	
:40	48.75	31.01	
:45	48.88	51.43	
:50	49.04	31.83	
:55	49.19	32.24	
13:00	49.34	32.64	
:05	49.48	33.00	
:10	49.62	33.40	
:15	49.77	33.79	
:20	49.93	34.18	
:25	50.06	34.56	
:30	50.23	34.94	
:35	50.39	35.31	speed check = 3.8
:40	50.56	35.70	
:45	50.73	36.05	
:50	50.94	36.48	
:55	51.11	36.80	
14:00	51.30	37.20	
14:05	51.45	37.55	
:10	51.62	37.88	
:15	51.78	38.27	
:20	51.89	38.68	
:25	52.01	39.11	
:30	52.11	39.51	speed check = 3.9

9 July 1982

TIME	LAT	LONG	REMARKS
14:35	52.24	39.94	
:40	52.38	40.34	
:45	52.56	40.73	
:50	52.76	41.07	
:55	52.94	41.40	
15:00	53.13	41.75	
:05	53.31	42.13	
:10	53.49	42.48	
:15	53.66	42.85	
:20	53.84	43.29	
:25	53.95	43.61	
:30	54.06	44.02	
:35	54.20	44.41	
:40	54.35	44.78	
15:45	54.47	45.16	← last pt. of day pull instruments out.
~~:50~~			

END.

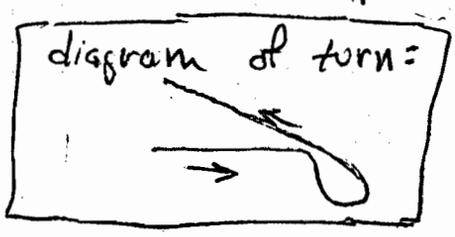
10 JULY 1982

TIME	LAT	LONG	REMARKS
7:10			Left Coast Guard Station
8:26			Equipment (Magi, Hydrophone, uniboom) in water here
8:30	42° 53.86'	70° 45.57'	todays symbol = *
:35	53.60'	45.77'	
:40	53.25	45.82	
:45	52.90	45.76	
:50	52.41	45.78	
:55	62.23	45.78	On line here/course ≈ N135
9:00	52.02	45.89	
:05	51.90'	44.91'	
:10	51.72	44.43	
:15	51.58	43.97	
:20	51.39	43.51	
:25	51.19	43.04	
:30	51.00	42.58	
:35	50.74	42.05	speed check ≈ 4.6
:40	50.57	41.67	
:45	50.35	41.22	
:50	50.15	40.76	
:55	49.94	40.32	
10:00	49.75	39.87	
:05	49.57	39.43	
:10	49.41	39.01	speed check ≈ 4.2
:15	49.25	38.58	
:20	49.09	38.14	
:25	48.92	37.73	
:30	48.74	37.28	
:35	48.60	36.90	speed ≈ 4.1
:40	48.42	36.47	
:45	48.25	36.07	
:50	48.04	35.67	
:56	47.79	35.20	
11:00	47.67	34.95	
:05	47.51	34.56	
:10	47.35	34.19	

10 JULY 1982

TIME	LAT	LONG	REMARKS
11:15	47.21	33.78	made turn to N83
:20	47.17	33.34	
:25	47.21	32.82	
:30	47.31	32.54	
:35	47.09	32.25	
:40	47.00	32.00	
:45	47.13	~~[illegible]~~ 31.57	starting complete turn around
		~~[illegible]~~ 31.57	
:50	47.09	31.28	to new course of ~N320
~~:50~~			
:55	47.30	31.69	turn around completed
12:00	47.50	32.15	
:05	47.70	32.58	
:10	47.93	32.99	
:15	48.18	33.40	
:20	48.41	33.82	
:25	48.65	34.24	
:30	48.86	34.69	
:35	49.07	35.14	
:40	49.29	35.61	
:45	49.49	36.08	
:50	49.68	36.52	
:55	49.88	36.99	
13:00	50.08	37.47	
:05	50.31	38.02	
:10	50.56	38.61	
:15	50.65	38.85	
:20	50.87	39.30	
:25	51.06	39.75	
:30	51.24	40.23	
:35	51.39	40.71	
:40	51.60	41.19	
:45	51.80	41.63	
:50	52.03	42.13	
:55	52.25	42.62	
14:00	52.45	43.08	
:05	52.66	43.54	
:10	52.87	44.03	
:15	53.06	44.41	last point on line turned North here

diagram of turn:



10 JULY 1982

TIME	LAT	LONG	REMARKS
14:20	42° 53.39'	70° 44.39'	
:25	53.75	44.25	
:30	54.10	44.14	
:35	54.46	44.02	
:40	55.01	43.82	
:45	55.19	43.76	
:50	42° 55.56'	70° 43.61'	← last pt. of day pull instrmnts out.

END

~~turned North here~~

11 JULY 1982

TIME	LAT	LONG	REMARKS
7:05			LEFT COAST GUARD STATION
			TODAY'S SYMBOL = ⊛
8:41	[illegible]	[illegible]	Instruments in water. Speed = 4.1
:45	42° 51.70'	70° 45.83'	
:50	51.37	45.81	
:55	51.03	45.83	
9:00	50.68	45.86	
:05	50.44	45.58	
:10	50.26	45.18	
:15	50.11	44.89	
:20	49.95	44.55	
:25	49.81	44.20	
:30	49.64	43.84	
:35	49.48	43.45	
:40	49.33	43.09	
:45	49.18	42.73	
:50	49.03	42.34	
:55	48.86	41.90	
10:00	48.75	41.60	
:05	48.60	41.23	
:10	48.46	40.86	
:15	48.31	40.52	
:20	48.17	40.17	
:25	48.03	39.85	
:30	47.87	39.53	
:35	47.73	39.21	
:40	47.60	38.90	
:45	47.46	38.61	
:50	47.32	38.28	
:55	47.18	37.99	{started turn here
11:00	47.24	37.68	{turn completed by 10:
:05	47.21	37.24	
:10	47.18	36.87	
:15	47.21	36.48	
:20	47.21	36.10	

TIME	LAT	LONG	REMARKS
11:25	47.21	35.68	start turn around to N316
:30	47.21	35.30	11:32.5 47.11 35.22
:35	47.18	35.11	11:37.5 47.27 35.31
:40	47.35	35.54	← finished turn on course N316
:45	47.57	35.97	
:50	47.81	36.45	
:55	48.00	36.85	
12:00	48.19	37.32	
:05	48.38	37.87	
:10	48.54	38.29	
:15	48.70	38.80	
:20	48.86	39.30	
:25	49.04	39.79	
:30	49.23	40.24	
:35	49.47	40.69	
:40	49.70	41.12	
:45	49.94	41.54	
:50	50.16	41.96	
:55	50.39	42.45	
13:00	50.55	42.85	
:05	50.70	43.30	
:10	50.85	43.78	
:15	50.99	44.26	
:20	51.12	44.71	
:25	51.30	45.14	
:30	51.53	45.53	
:35	51.88	45.75	
:40	52.25	45.78	
:45	52.64	45.73	
:50	53.02	45.61	
:55	53.38	45.44	
14:00	53.74	45.33	
:05	54.12	45.37	
:10	54.49	45.33	
:15	54.86	45.19	
:20	55.22	45.12	
:25	55.58	45.15	
:30	55.94	45.14	

11 JULY 1982

TIME	LAT	LONG	REMARKS
14, 35	42° 56.28	70° 45.12	
:40	56.65	45.12	
:45	56.98	45.09	made turn to N45 here
:50	57.33	44.96	
:55	57.66	44.72	
15:00	57.91	44.40	
:05	58.18	44.10	
:10	58.46	43.74	
:15	58.73	43.53	
:20	59.07	43.50	
:25	59.42	43.45	
:30	59.75	43.38	
:35	43° 00.05′	70° 43.15′	
:40	00.30	42.94	
:45	00.55	42.63	
:50	00.81	42.39	
:55	01.12	42.15	
16:00	01.42	42.02	
:05	01.73	41.86	
:10	02.00	41.60	
:15	02.15	41.22	Last fix of day.

END

JULY 13 1982

TIME	LAT	LONG	REMARKS
8:00			left coast guard station very froggy this morn.
8:40			Instruments in water
8:45	43° 02.33	70° 40.33	
8:50	02.33	39.93	
:55	02.17	39.57	
9:00	01.91	39.45	
:05	01.68	39.16	
:10	01.54	38.74	speed 4.1
:15	01.31	38.41	
:20	01.05	38.13	
:25	00.80	37.79	
:30	00.56	37.46	
:35	00.33	37.12	
:40	00.05	36.80	
9:45	42° 59.75	36.48	
:50	59.56	36.14	
:55	59.41	35.70	
10:00	59.24	35.26	
:05	59.09	34.80	
:10	58.95	34.36	
:15	58.81	33.92	
:20	58.70	33.58	
:25	58.57	33.04	
:30	58.45	32.61	
:35	58.36	32.19	
:40	58.23	31.79	
:45	58.07	31.40	
:50	57.91	31.04	
:55	57.75	30.71	speed check = 3.6
11:00	57.61	30.36	speed check = ~~4.4~~ 3.3
:05	57.42	29.96	
:10	57.30	29.64	
:15	57.13	29.25	
:20	56.96	28.88	
:25	56.83	28.58	

13 JULY 1982

TIME	LAT	LONG	REMARKS
11:30	56.67	28.20	
:35	56.53	27.83	
:40	56.40	27.45	
:45	56.28	27.07	
:50	56.16	26.68	
:55	56.05	26.28	
12:00	55.82	26.34	
:05	55.62	26.73	
:10	55.41	27.02	
:15	55.15	27.25	
:20	54.88	27.42	
:25	54.57	27.51	
:30	54.28	27.59	
:35	54.00	27.65	
:40	53.70	27.78	
:45	53.43	27.95	
:50	53.15	28.13	
:55	52.89	28.33	
13:00	52.64	28.53	
:05	52.38	28.75	
:10	52.13	28.96	
:15	51.87	29.18	
:20	51.63	29.40	
:25	51.37	29.59	
:30	51.12	29.78	
:35	50.83	29.93	
:40	50.56	30.09	
:45	50.29	30.23	
:50	50.01	30.38	
:55	49.73	30.52	
14:00	49.46	30.66	
:05	49.15	30.84	
:10	48.99	31.10	
:15	48.82	31.47	
:20	48.69	31.83	
:27	48.44	32.33	
:30	48.34	32.53	

14 JULY 1982

TIME	LAT	LONG	REMARKS
7:10			Left Coast Guard station.
8:02			Eqip. in water & up to speed = 4.0
8:05	43° 00.06'	70° 35.21'	
8:10	00.05	34.82	todays symbol =
8:15	42° 59.78'	34.45'	
:20	59.51	34.14	
:25	59.39	33.68	
:30	59.24	33.24	
:35	59.03	32.79	
:40	58.80	32.40	
:45	58.62	31.97	
:50	58.47	31.53	
:55	58.30	51.06	
9:00	58.16	30.62	
:05	58.01	30.13	
:10	57.87	29.67	
:15	57.72	29.21	
:20	57.59	28.79	
:25	57.43	28.37	
:30	57.28	~~[illegible]~~ 27.97	
:35	57.15	27.51	
:40	56.95	27.64	
:45	56.78	27.93	
:50	56.54	28.13	
:55	56.27	28.32	
10:00	55 [illegible].99	28.44	
:05	55.72	28.53	
:10	55.44	28.66	
:15	55.16	28.80	
:20	54.90	28.95	
:25	54.64	29.15	
:30	54.37	29.31	
:35	54.14	29.55	
:40	53.92	29.81	

14 JULY 1982

TIME	LAT	LONG	REMARKS
10:45	42° 53.68	70° 30.09	
:50	53.50	30.32	
:55	53.26	30.58	
11:00	52.99	30.79	
:05	52.72	30.96	
:10	52.43	31.08	
:15	52.14	31.19	
:20	51.86	31.34	
:25	51.58	31.50	
:30	51.28	31.64	
:35	51.02	31.81	
:40	50.77	32.03	
:45	50.51	32.25	
:50	50.21	32.46	
:55	49.95	32.73	
12:00	49.94	33.11	
:05	50.10	33.48	
:10	50.29	33.84	
:15	50.49	34.17	
:20	50.68	34.54	
:25	50.86	34.94	
1:30	51.03	35.29	
:35	51.24	35.66	
:40	51.42	36.03	
:45	51.61	36.43	
:50	51.82	36.84	
:55	52.00	37.26	
13:00	52.19	37.67	
:06	52.42	38.19	
:10	52.56	38.50	
:15	52.74	38.95	
:20	52.91	39.39	
:25	53.06	39.87	
:30	53.22	40.32	speed check = 4.5
:35	53.42	40.89	
:40	53.54	40.26	

14 JULY 1982

TIME	LAT	LONG	REMARKS
13:45	42° 53.84'	70° 41.52'	Turn to N25
13:50	54.20	41.62	
:55	54.56	41.61	
14:00	54.91	41.52	
:05	55.25	41.37	
:10	55.65	41.10	
:15	55.95	41.04	
:20	56.29	40.87	
:25	56.64	40.72	
:30	57.01	40.60	
:37	57.52	40.41	
:40	57.79	40.35	
:45	58.11	40.32	
:50	58.49	40.28	
:55	58.86	40.26	
15:00	59.24	40.19	
:05	59.61	40.14	
:10	59.97	40.08	
:15	48° 00.32	70° 40.04	
:20	00.69	39.98	
:25	01.06	39.92	
:30	01.46	39.82	
:35	01.78	39.75	
:40	02.13	39.67	

END

15 JULY 1982

TIME	LAT	LONG	REMARKS
7:10			Left Coast Guard station.
8:12			Equipment in water
8:15	42° 58.82'	70° 35.83'	
8:20	42° 58.64	70° 35.63	
:25	58.61	35.28	
:30	58.50	~~35.98~~ 34.98	increase speed to 4.9
:35	58.38	34.51	
:40	58.19	33.96	
:45	58.04	33.52	
:50	57.89	33.06	
:55	57.72	32.57	
9:00	57.52	31.95	
:05	57.38	31.60	
:10	57.19	31.15	
:15	57.06	30.74	
:20	56.90	30.33	
:26	56.71	29.80	
:30	56.58	29.42	Turn to 230
:35	56.36	29.60	
:40	56.18	29.98	
:45	55.96	30.37	
:50	55.72	30.72	
:55	55.40	30.81	
10:00	55.04	30.84	
:05	54.72	31.05	
:10	54.45	31.32	
:15	54.17	31.63	speed = 4.2
:20	53.91	31.96	
:25	53.65	32.27	
:30	53.35	32.49	
:35	53.05	32.66	
:40	52.75	32.88	
:45	52.44	33.09	
:50	52.14	33.34	
:55	51.85	33.58	
11:00	51.58	33.85	

15 JULY 1982

TIME	LAT	LONG	REMARKS
11:05	42° 51.31'	70° 34.15'	
:10	51.04'	34.41'	
:15	50.75	34.66	
:20	50.47	34.93	
:25	50.19	35.18	
:30	49.91	35.43	
:35	49.59	35.73	
:40	49.36	35.96	
:45	49.08	36.18	
:50	48.79	36.44	
:55	48.53	36.67	
12:00	48.27	36.88	
:05	48.00	37.14	
:10	47.71	37.36	
:15	47.44	37.66	
:20	47.68	37.95	
:25	48.08	38.06	
:30	48.46	38.09	
:35	48.85	38.04	
:40	49.24	37.90	
:45	49.59	37.75	
:50	49.98	37.66	
:55	50.38	37.75	
13:00	50.76	37.91	
:05	51.17	38.08	
:10	51.57	38.18	
:15	51.95	38.28	
:20	52.34	38.39	
:25	52.73	38.49	
:30	53.13	38.59	
:35	53.54	38.67	
:40	53.94	58.68	
:45	54.40	38.63	
:50	54.76	38.59	
:55	55.16	38.59	
14:00	55.55	38.57	

15 JULY 1982

TIME	LAT	LONG	REMARKS
14:05	55.96	38.57	
:10	56.34	38.61	
:15	56.79	38.85	
:20	57.08	38.78	turn around fish nets
:25	57.38	39.02	
:30	57.69	39.30	turn around another fish net
:35	58.06	39.47	
:40	58.43	39.49	
:45	58.81	39.46	
:50	59.23	39.41	
:55	59.58	39.38	
15:00	59.96	39.35	
:05	43° 00.34′	39.36′	
:10	43° 00.70′	39.40	
:15	01.07	39.47	
:20	01.42	39.58	
:25	01.78	39.73	
:30	02.14	39.79	
:35	02.49	39.68	
:40	02.76	39.35	
:45	03.05	39.08	
:50	03.07	39.48	
:55	02.92	39.87	
16:00	02.69	40.21	
:05	02.46	40.51	
:10	02.30	40.94	
:15	02.12	41.58	Last reading of today

END

16 JULY 1982

TIME	LAT	LONG	REMARKS
7:11			Left Coast Guard Station
07:32	43° 02.79'	70° 41.64'	
07:36	02.69	41.42	
:40	02.84	41.06	
:45	02.71	40.67	
:50	02.37	40.54	
:55	02.06	40.29	
08:00	01.79	39.93	
:05	01.54	39.56	
:10	01.33	39.17	
:15	01.00	39.10	
:20	00.65	39.01	
:25	00.31	38.90	
:30	42° 59.98'	70° 38.75'	
:35	59.66	38.53	speed check = 4.3
:40	59.30	38.36	
:45	58.94	38.19	
:50	58.56	38.09	
:55	58.22	38.07	
09:00	57.87	38.08	
09:05	57.51	38.09	steered around lobster boat.
:10	57.26	37.75	made turn to 158.
:15	57.07	37.30	
:20	56.89	36.86	
:25	56.72	36.37	
:30	56.56	35.89	
:35	56.39	35.41	
:40	56.23	34.94	
:45	56.00	34.49	
:48	55.86	34.24	
:50	55.74	34.28	
:52	55.66	34.41	
:55	55.53	34.65	
10:00	55.32	34.95	
:03	55.09	35.13	
:05	54.95	35.16	

16 JULY 1982

TIME	LAT	LONG	REMARKS
10:08	42° 54.74	70° 35.07	
:10	54.59	35.03	
:15	54.33	35.33	
:20	54.10	35.69	
:25	53.83	35.98	
:30	53.49	36.13	
:35	53.15	36.25	
:40	52.86	36.51	
:45	52.55	36.76	
:50	52.25	37.02	
:55	51.98	37.27	
11:00	51.69	37.54	
:05	51.39	37.79	
:10	51.09	38.05	
:15	50.79	38.28	
:20	50.46	38.49	
:25	50.15	38.69	
:30	49.84	38.93	
:35	49.53	39.16	
:40	49.22	39.41	
:45	48.91	39.64	
:50	48.60	39.91	
:55	48.28	40.15	making right to 295°
:57	48.28	40.35	
12:00	48.34	40.60	making right to 025°
:05	48.67	40.65	
:10	48.95	40.34	
:15	49.23	40.01	
:20	49.55	39.75	
:25	49.86	39.48	turning right to 148°
:30	49.68	39.14	
:35	49.47	39.25	turn to 238°
:40	49.21	39.50	
:45	49.01	39.48	
:50	48.81	39.85	
:55	48.47	39.96	
13:00	48.31	40.34	

16 JULY 1982

TIME	LAT	LONG	REMARKS
1305	42° 47.89	70° 40.49′	
:10	47.58	40.66	
:15	47.25	40.86	
:20	46.92	41.06	
:25	46.89	41.47	
:30	47.20	41.72	
:35	47.47	42.04	
:40	47.74	42.33	
:45	47.92	42.72	
:50	48.09	43.13	
:55	48.28	43.54	
14:00	48.45	43.94	
:05	48.64	44.36	making turn to N 65
:10	48.96	44.29	
:15	49.22	~~43.87~~ 43.97	
:20	49.49	43.66	
:25	49.79	43.36	
:30	50.10	43.17	
:35	50.44	43.00	
:40	50.76	42.79	
:45	51.06	42.55	
:50	51.35	42.26	
:55	51.66	~~42.95~~ 41.95	
15:00	51.95	41.69	
:05	52.25	41.40	
:10	52.54	41.13	
:15	52.83	40.85	
:20	53.12	40.55	
:25	53.42	40.26	
:30	53.75	40.06	
:35	54.10	39.88	
:40	54.45	39.70	
:45	54.80	39.51	
:50	55.13	39.31	
:55	55.47	39.06	
16:00	55.80	38.75	
:05	56.09	38.47	
:10	56.40	38.18	
:15	56.72	37.90	

16 JULY 1952

TIME	LAT	LONG	REMARKS
16:20	42° 57.06	70° 37.69	
:25	57.42	37.58	Last fix of the day.

END

18 JULY 1982

TIME	LAT	LONG	REMARKS
7:31			staff in water
07:35	43° 02.84'	70° 40.65'	▲ = today's synoptic
07:40	02.98	40.23	
:45	03.11	39.76	
:50	03.22	39.27	
:57	03.30	38.62	
08:00	03.34	38.31	
:05	03.34	37.92	
:10	03.26	37.37	
:15	03.34	37.02	
:20	03.54	36.63	
:25	03.38	36.26	
:30	03.14	35.95	
:35	02.90	35.65	
:40	02.68	35.29	
:45	02.54	34.86	
:50	02.43	34.44	
:55	02.33	33.98	
9:00	02.23	33.55	
:02	02.17	33.38	
:05	02.05	33.18	
:10	01.84	32.81	speed check = 4.0
:15	01.62	32.45	
:20	01.40	32.13	
:25	01.23	31.73	
:30	01.06	31.31	
:35	00.91	30.89	
:40	00.77	30.44	
:45	00.63	30.01	
:50	00.50	29.58	
:55	00.35	29.16	
10:00	00.17	28.78	
:05	42° 59.99'	70° 28.39'	
:10	59.80	28.03	
:15	59.37	27.24	
20			

18 July 1982

TIME	LAT	LONG	REMARKS
10:25	42° 59.22'	~~70° 26.91~~ 70° 26.92'	
:30	59.01	26.57	
:35	58.81	26.21	
:40	58.60	25.85	
:45	58.43	25.43	
:50	58.29	25.08	start to turn to 216
:55	58.04	25.18	finish turn to 216
11:00	57.83	25.51	
11:05	57.49	25.53	
:10	57.18	25.52	
:15	56.88	25.64	
:20	56.60	25.89	
:25	56.33	26.15	
:30	56.06	26.41	
:35	56.31	26.67	
:40	56.67	26.84	
:45	57.04	26.97	
:50	57.41	27.04	
:55	57.72	27.30	
12:00	58.02	27.60	
:05	58.36	27.87	
:10	58.65	28.07	slowing to let the sail boat go by.
:15	58.97	28.30	
~~:18~~			
:20	59.27	28.53	make turn to N10
:25	59.64	28.69	
:30	59.96	28.79	
:35	43° 00.34'	28.82	
:40	00.68'	28.84	
:45	01.04	28.86	turned to N316
:50	01.27	29.13	
:55	01.44	29.50	
13:00	01.61	29.88	
:05	01.78	30.28	
:10	01.97	30.68	
:15	02.12	31.04	

18 JULY 1982

TIME	LAT	LONG	REMARKS
13:20	43° 02.29'	70° 31.47'	
13:25	02.45	31.84	
:30	02.59	32.27	
:35	02.74	32.68	
:40	02.90	33.10	
:45	03.05	33.54	
:50	03.19	33.97	
:55	03.37	34.39	
14:00	03.58	34.80	
:05	03.80	35.21	
:08	03.92	35.44	← { make turn to
:10	03.93	35.61	N234 ~~[illegible]~~
:15	03.71	[illegible] 36.01	
:20	03.48	36.38	
:26	03.21	36.85	
:30	03.00	37.14	
:35	02.68	37.34	
:40	02.31	37.38	
:45	02.00	37.57	
:50	01.78	37.92	
:55	01.58	38.35	
15:00	01.31	38.63	
:05	01.00	38.86	
:10	00.67	39.03	
:15	00.34	39.26	
:20	00.03	39.48	
:25	42° 59.78'	70° 39.78'	
:30	59.55	40.13	
:35	59.30	40.51	
:40	59.10	40.86	
:45	58.83	41.28	turn to ~~[illegible]~~ N340
:50	58.02	41.58	
:55	59.30	41.81	
16:00	59.64	41.94	

18 JULY 1982

TIME	LAT	LONG	REMARKS
16:05	42° 59.99'	70° 42.06'	
:10	43° 00.26'	70° 42.35'	
:15	00.50	42.69	
:20	00.72	43.03	Last pt. of today.

END

19 July 1982

TIME	LAT	LONG	REMARKS
7:17			Leave C.G. Station
07:40	43° 02.67′	70° 41.26′	Equipment in & operational
:45	02.35	41.57	
:51	01.93	41.80	Symbol = ✦ or ●
:55	01.65	41.94	
:59	01.25	42.22	
08:05	01.15	42.69	
:10	01.11	43.17	
:12	01.12	43.41	
:15	00.93	43.39	
:20	00.66	43.16	
:25	00.50	42.73	
:27	00.45	42.58	
:30	00.38	42.32	turn after
:35	00.25	42.60	
:40	00.25	43.11	
:45	00.23	43.69	
:49 ~~:50~~	00.20	44.03	start turn
:50	00.16	44.11	finish turn
:55	42° 59.90′	70° 43.82′	
09:00	59.64	43.46	
:05	59.40	43.08	
:10	59.14	42.74	
:15	58.85	42.43	
:18	58.66	42.24	start turn
:21	58.56	42.42	finish turn
:25	58.57	42.80	
:30	58.63	43.27	
:35	58.70	43.77	
:40	58.75	44.18	
:45	58.80	44.60	
:50	58.87	45.06	
:53	58.72	45.09	
:55	58.59	45.00	

19 July 1982

TIME	LAT	LONG	REMARKS
10:00	42° 58.30'	70° 44.74'	
10:05	58.07	44.37	
:10	57.83	44.00	
:13	57.67	43.75	
:15	57.58	43.90	
:20	57.61	44.28	
:25	57.69	44.76	
:30	57.72	45.16	
:35	57.73	45.56	
:38	57.61	45.63	
:40	57.47	45.54	
:45	57.15	45.32	
:50	56.79	45.22	
:55	56.44	45.07	turn
:58	56.36	45.22	
11:00	56.42	45.35	
:05	56.60	45.76	
:10	56.75	46.12	
:15	56.94	46.48	turn
:18	56.85	46.46	
:20	56.75	46.31	
:25	56.48	46.00	
:30	56.17	45.72	
:33	56.00	45.57	
:35	55.87	45.47	
:38	55.79	45.62	
:40	55.80	45.80	
:45	55.88	46.30	
:50	55.90	46.66	
:55	55.92	47.15	
:58	55.93	47.41	
12:00	55.88	47.42	
:05	55.66	47.03	
:10	55.48	46.57	
:15	55.30	46.16	

19 July 1982

TIME	LAT	LONG	REMARK
12:20	42° 55.09'	70° 45.74'	
:23	54.96	45.53	
:25	54.90	45.59	
:28	54.89	45.84	
:30	54.89	46.05	
:35	54.83	46.55	
:40	54.76	47.07	
:45	54.71	47.60	
:48	54.67	47.90	
:50	54.60	47.84	
:53	54.46	47.55	
:55	54.36	47.35	
13:00	54.05	47.00	
:06	53.65	46.55	
:10	53.60	46.16	
:15	53.48	45.69	
:18	53.38	45.78	
:20	53.37	46.03	
:23	53.35	46.33	
:25	53.33	46.52	
:30	53.31	47.05	
:35	53.32	47.57	
:37	53.31	47.79	
:42	52.95	47.52	
:45	52.74	47.31	
:50	52.63	46.72	
:55	52.54	46.12	
14:00	52.31	45.62	
:05	52.01	45.19	Last fix of summ

END OF DATA FOR CRUISE