

Form 604

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Oceanographic

DI454-2-67

Field No. DI470-2-67 Office No. _____

LOCALITY

State _____

General locality Western North Atlantic

Locality Blake Plateau

1967

CHIEF OF PARTY

Lorne G. Taylor, CAPT, USESSA

LIBRARY & ARCHIVES

DATE _____

Descriptive Report to Accompany
Special Project AMC-11-67

USC&GSS DISCOVERER
CAPT Lorne G. Taylor, Commanding
Oct. 3-18, 1967

A. PROJECT: Special project AMC-11-67. Instructions dated 11 September 1967.

B. AREA SURVEYED: The area surveyed on this project was the portion of the Blake Plateau between latitude $30^{\circ} 00' N$ and latitude $33^{\circ} 00' N$ and between the 100 and 1000 fathom curves. The survey was conducted from 3 Oct. 6 1967 (Julian day 276) to 18 Oct. 1967 (Julian day 291).

Survey operations included dredgings, camera lowerings, multi-sensor lowerings, and the routine trackline procedure between each oceanographic station. Gravity and magnetic observations were included on the longer portions of the trackline and on the crossline.

C. SOUNDING VESSEL: All field work was carried out aboard the USC&GSS DISCOVERER (OSS 02).

D. SOUNDING EQUIPMENT: EDO Corporation Depth Recorder Indicators, Model 185, serial numbers 113 and 120; General Instruments Corporation, Narrow beam Echo Sounder, Model 853, serial number 1A; Precision Depth Recorders Mark XV, serial numbers 201 and 202. Echo sounder corrections were obtained with multi-sensor observations at selected stations, and in accordance with instructions in the Hydrographic Manual.

E. SMOOTH SHEET: No smooth sheet was prepared. Positions on the boat sheet were properly adjusted after completion of the survey to show the track run by the ship between stations. Positions were then pricked on to a mylar overlay. Corrected soundings were placed on the overlay.

- F. CONTROL: Loran A stations LH6 and LH7, and Loran C stations SSOV AND SSOY were used throughout the survey.
- G. SHORELINE: Not applicable.
- H. CROSSLINES: The general direction of the trackline was across the meridians. One crossline was run from the southerly limit of the project area to the point where this project joined Special Project AMC-14-67.
- I. JUNCTIONS: Not applicable.
- J. COMPARISON WITH PRIOR SURVEYS: Not applicable.
- K. COMPARISON WITH THE CHARTS: Chart 1001 was used for comparison of the entire project area and chart 1111 was used in a small portion at the west edge of the project. In general, depths were in agreement. However, there were a few locations at which there appears to be a discrepancy. At Lat. $31^{\circ} 37' N$, Long. $079^{\circ} 03' W$, chart 1001 indicates a 430 fathom sounding. Our records have shown the depth to be approximately 290 fathoms in this area. At Lat. $31^{\circ} 55' N$, Long. $078^{\circ} 48' W$, we have located an area as shallow as 210 fathoms. Chart 1001 indicates a 418 fathom sounding very near this area but does not show this shallower depth. At Lat. $30^{\circ} 34' N$, Long. $077^{\circ} 38' W$, chart 1001 indicates a sounding of 720 fathoms. Oceanographic station 63 was located exactly at the position of this sounding on the chart and our records show depths of approximately 470 fathoms, with indication of the deeper water.
- L. ADEQUACY OF SURVEY: The survey has adequately fulfilled all desired aims of LASIL personnel in accordance with the project instructions, dated 11 Sept. 1967.
- M. AIDS TO NAVIGATION: Not applicable

N. STATISTICS:

(1) Miles Surveyed -----	1165.1	naut. miles
(2) Miles Misc. -----	304	naut. miles
(3) Positions -----	531	
(4) Dredge Lowerings -----	109	
(5) Camera Stations -----	51	
(6) BT Lowerings -----	78	
(7) STD Lowerings -----	7	
(8) Cores -----	3	

- O. MISCELLANEOUS: Fix numbers were not assigned to positions, instead the GMT, and Julian Day were used.

During the trackline, the computer was relied on to give navigational and geophysical data. Type-outs of the geophysical and hydrographic reports are enclosed with the project.

The computer was used to calculate the position of the ship for ninety percent of the trackline. Loran A or C rates were entered into the thumb wheels which the computer read. The calculated position, depth of water, course, speed, and dead reckoning error were printed out on the hydrographic report.

The automatic depth input was pre-corrected for the ship's draft. The fathograms were scanned against the hydrographic report, and when a discrepancy (difference greater than one percent of depth) arose, the sounding on the fathogram was taken as correct. The check of the fathogram against the hydrographic report showed that the automatic depth input was very reliable. Discrepancies amounted to plus or minus one to two percent of the depth when the computer was operating correctly. Larger discrepancies were due to the computer reading a multiple of the correct depth.

The DR position between fixes will be eliminated on the hydrographic report in the future as they are superfluous.

P. RECOMMENDATIONS: Receiving the velocity corrections before the project begins could eliminate a step in processing. These corrections as well as the initial corrections could be applied as the trackline progresses, giving the corrected soundings on the hydrographic report.

The investigation of the Blake Plateau was successful and LASIL personnel were satisfied with the information accumulated. LASIL personnel should be consulted for any further recommendations desired concerning the project.

George A. Maul
George A. Maul
LCDR, USESSA for
Dino J. Ferralli
ENS, USESSA

Approved and Forwarded:

Lorne G. Taylor
Lorne G. Taylor
CAPT, USESSA

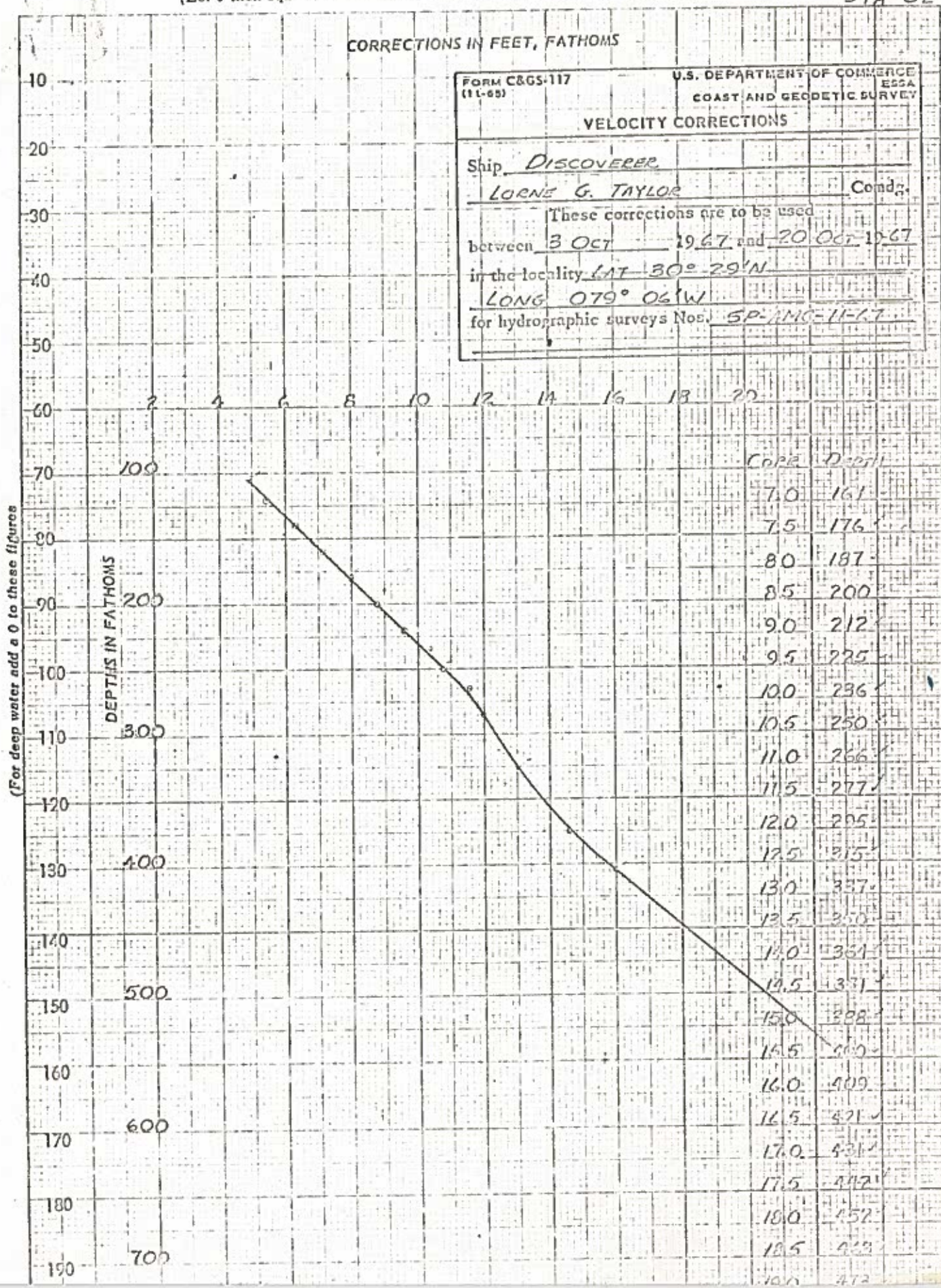
(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

STA 02

CORRECTIONS IN FEET, FATHOMS

FORM C&GS-117 (11-65)	U.S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY	
VELOCITY CORRECTIONS		
Ship <u>DISCOVERER</u>		
<u>LORNE G. TAYLOR</u>	Comdr.	
These corrections are to be used		
between <u>3 OCT</u>	<u>1967</u>	and <u>20 OCT 1967</u>
in the locality <u>LAT 30° 29' N</u>		
<u>LONG 079° 06' W</u>		
for hydrographic surveys Nos. <u>SP-116-11-67</u>		

(For deep water add a 0 to these figures)



DEPTH	VELOCITY CORRECTION
70	161
75	176
80	187
85	200
90	212
95	225
100	236
105	250
110	266
115	277
120	295
125	315
130	337
135	350
140	364
145	377
150	388
155	400
160	409
165	421
170	431
175	442
180	452
185	463
190	473

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 KEUFFEL & ESSER CO.

METERS	MID-DEPTH OF EACH LAYER	LAYER VELOCITY	CORRECTION FACTOR	LAYER CORRECTION	DEPTH CORRECTION	Applicable Depth Fathoms
	FATHOMS	M/Sec.				
8.2	4.5	1540.3	0.05284	0.2642	0.26	7
17.4	9.5	1540.3	0.05284	0.2642	0.52	12
26.5	14.5	1540.6	0.05304	0.2652	0.79	17
35.7	19.5	1540.8	0.05318	0.2659	1.06	22
44.8	24.5	1540.9	0.05325	0.2662	1.33	27
54.0	29.5	1541.1	0.05338	0.2669	1.60	32
63.1	34.5	1541.1	0.05345	0.2672	1.86	37
72.3	39.5	1541.9	0.05392	0.2696	2.13	42
81.4	44.5	1540.2	0.05277	0.2638	2.37	47
90.6	49.5	1537.7	0.05106	0.2553	2.65	52
99.7	54.5	1535.3	0.04976	0.2488	2.90	57
108.9	59.5	1534.5	0.04887	0.2444	3.14	62
118.0	64.5	1533.8	0.04839	0.2420	3.38	67
127.2	69.5	1532.5	0.04751	0.2376	3.62	72
136.3	74.5	1531.8	0.04702	0.2351	3.86	77
145.5	79.5	1530.8	0.04634	0.2317	4.09	82
154.6	84.5	1530.1	0.04587	0.2294	4.32	87
163.2	89.5	1529.5	0.04546	0.2273	4.54	92
172.9	94.5	1528.5	0.04477	0.2238	4.77	97
180.3	98.5	1528.0	0.04443	0.1777	4.95	100
201.3	110.0	1526.8	0.04361	0.5015	5.45	120
237.9	130.0	1525.2	0.04252	0.8504	6.30	140
274.5	150.0	1524.0	0.04170	0.8340	7.13	160
311.1	170.0	1523.2	0.04115	0.8230	8.00	180
347.7	190.0	1522.3	0.04122	0.8244	8.78	200
384.3	210.0	1522.3	0.04087	0.8174	9.60	220
420.9	230.0	1521.3	0.03985	0.7970	10.39	235
439.2	240.0	1520.7	0.03944	0.3944	10.79	250
475.8	260.0	1519.6	0.03862	0.7738	11.56	265
494.1	270.0	1519.5	0.03862	0.3862	11.95	285
549.0	300.0	1516.2	0.03637	1.0911	13.04	325
640.5	350.0	1508.5	0.03110	1.5550	14.59	375
737.0	400.0	1504.1	0.02800	1.4045	16.00	404.3
748.0	409.6	1503.4	0.02761	0.2374	16.24	

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

STA 10

CORRECTIONS IN FEET, FATHOMS

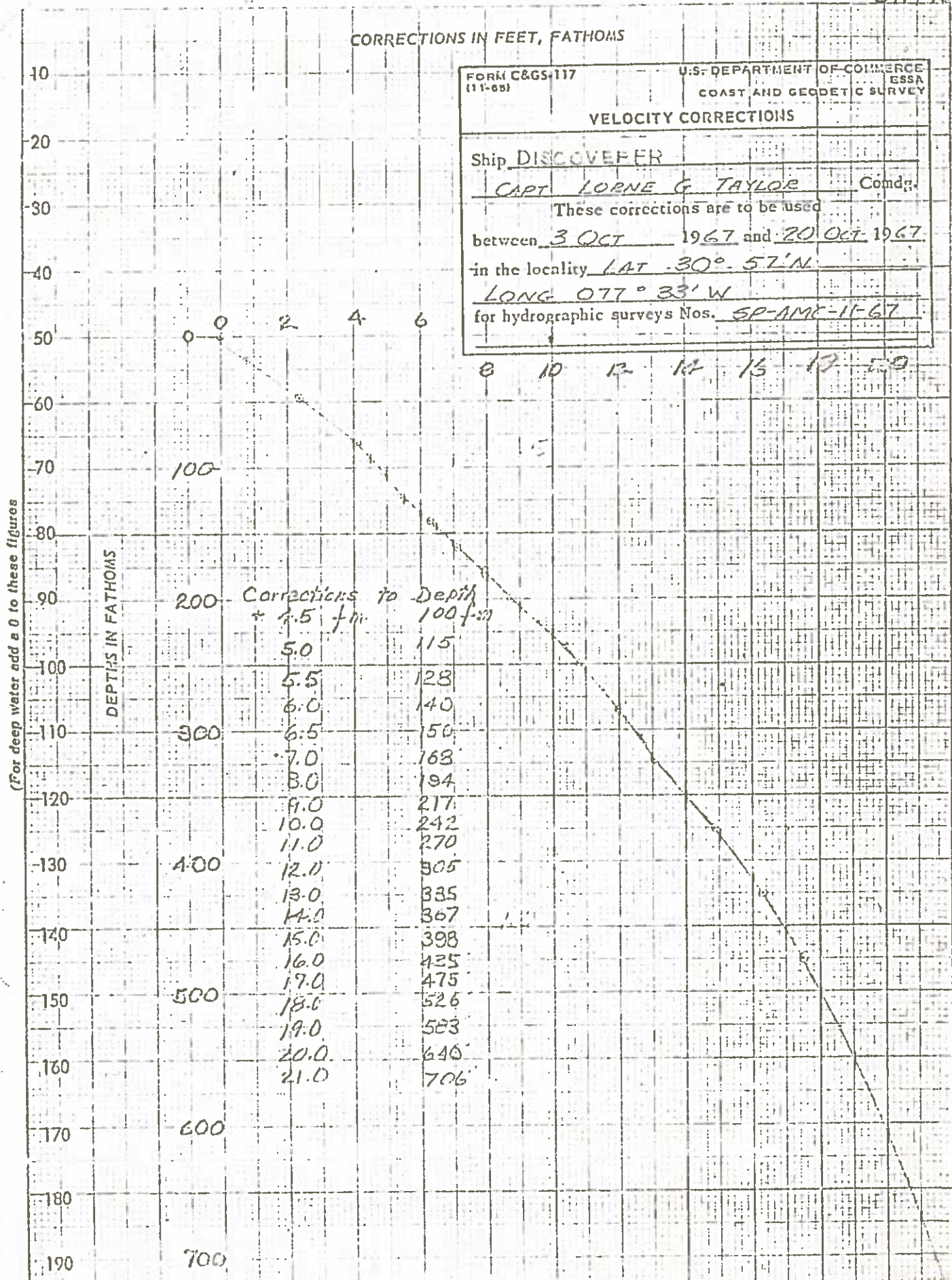
FORM C&GS-117 (11-65)	U.S. DEPARTMENT OF COMMERCE ESSA COAST AND GEODETIC SURVEY
VELOCITY CORRECTIONS	
Ship <u>DISCOVERER</u>	
<u>CAPT LORNE G TAYLOR</u>	Comdr.
These corrections are to be used	
between <u>3 OCT</u> 1967 and <u>20 OCT 1967</u>	
in the locality <u>LAT 30° 57' N</u>	
<u>LONG 077° 33' W</u>	
for hydrographic surveys Nos. <u>SP-AMC-11-67</u>	

(For deep water add a 0 to these figures)

DEPTHS IN FATHOMS

Corrections to Depth
+ 1.5 fm

100	5.0	115
	5.5	128
	6.0	140
300	6.5	150
	7.0	163
	8.0	194
	9.0	217
	10.0	242
	11.0	270
400	12.0	305
	13.0	335
	14.0	367
	15.0	398
	16.0	435
	17.0	475
500	18.0	526
	19.0	583
	20.0	640
	21.0	706



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 NEUFEL & ESSER CO.

MID-DEPTH OF EACH LAYER	MID-DEPTH OF EACH LAYER	LAYER VELOCITY	CORRECTION FACTOR	LAYER CORRECTION	DEPTH CORRECTION	APPLICABLE DEPTH		
METERS	FATHOMS	M/S				FATHOMS		
8.2	4.5	1539.3	+0.05215	0.2608	0.26	7		
17.4	9.5	1539.5	0.05212	0.2614	0.52	12		
26.5	14.5	1539.7	0.05213	0.2622	0.78	17		
35.7	19.5	1539.8	0.05213	0.2624	1.05	22		
44.8	24.5	1539.9	0.05213	0.2628	1.31	27		
54.0	29.5	1540.1	0.05210	0.2635	1.57	32		
63.1	34.5	1540.2	0.05216	0.2638	1.84	37		
72.3	39.5	1540.2	0.05217	0.2638	2.10	42		
81.4	44.5	1540.3	0.05281	0.2642	2.36	47		
90.6	49.5	1539.7	0.05243	0.2622	2.63	52		
99.7	54.5	1537.6	0.05079	0.2550	2.88	57		
108.9	59.5	1535.8	0.04975	0.2483	3.13	62		
118.0	64.5	1534.0	0.04333	0.2426	3.37	67		
127.2	69.5	1532.7	0.04764	0.2382	3.61	72		
136.3	74.5	1532.0	0.04716	0.2359	3.85	77		
145.5	79.5	1530.7	0.04633	0.2314	4.08	82		
154.6	84.5	1530.3	0.04600	0.2300	4.31	87		
163.8	89.5	1528.2	0.04525	0.2262	4.53	92		
172.9	94.5	1528.5	0.04451	0.2242	4.76	97		
180.3	98.5	1528.2	0.04453	0.1785	4.94	105		
201.3	110.0	1526.7	0.04357	0.5007	5.14	120		
237.9	130.0	1525.2	0.04232	0.8504	6.29	140		
274.5	150.0	1524.7	0.04211	0.8436	7.13	160		
311.1	170.0	1523.7	0.04149	0.8293	7.86	150		
347.7	190.0	1521.3	0.03957	0.7970	8.76	200		
384.3	210.0	1522.2	0.04044	0.8094	9.57	220		
420.9	230.0	1521.3	0.03957	0.7970	10.37	235		
439.2	240.0	1521.0	0.03964	0.3964	10.76	250		
475.8	260.0	1521.5	0.04211	0.5039	11.57	265		
494.1	270.0	1522.3	0.03916	0.3916	11.76	285		
549.0	300.0	1518.8	0.03814	1.1472	12.10	325		
640.5	350.0	1513.5	0.03722	1.7260	14.83	375		
737.0	400.0	1506.1	0.03622	1.4625	16.30	425		
823.5	450.0	1498.1	0.03527	1.1960	17.49	475		

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

STA 24

CORRECTIONS IN FEET, FATHOMS

FORM C&GS:117
(11-52)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

VELOCITY CORRECTIONS

Ship Discoverer

CAPT Lorne Taylor

Comdg.

These corrections are to be used

between 3 Oct 1967 and 20 Oct 1967

in the locality Lat 31° 15' N

Long 078° 56' W

for hydrographic surveys Nos. SP-MC-11-67

(For deep water add a 0 to these figures)

DEPT'S IN FATHOMS

Corrections to depth

4.5	105 fm.
5.0	122.5
5.5	134
6.0	146.5
6.5	156.5
7.0	171.0
8.0	205.0
9.0	240.0
10.0	266.5
11.0	301.5
12.0	340.0
13.0	371.0

200

300

STA 24

MID DEPTH OF EACH LAYER METERS	MID-DEPTH OF EACH LAYER FATHOMS	LAYER VELOCITY M/sec	CORRECTION FACTOR	LAYER CORRECTION	DEPTH CORRECTION	Applicable Depth Fathoms
8.2	4.5	1542.6	0.05441	0.2720	0.27	7
17.4	9.5	1542.7	0.05448	0.2724	0.54	12
26.5	14.5	1542.8	0.05455	0.2728	0.82	17
35.7	19.5	1542.9	0.05462	0.2734	1.09	22
44.8	24.5	1543.0	0.05468	0.2734	1.36	27
54.0	29.5	1542.5	0.05435	0.2718	1.64	32
63.1	34.5	1541.0	0.05331	0.2666	1.90	37
72.3	39.5	1538.8	0.05181	0.2590	2.16	42
81.4	44.5	1536.6	0.05031	0.2516	2.41	47
90.6	49.5	1534.5	0.04881	0.2444	2.66	52
99.7	54.5	1531.8	0.04732	0.2351	2.89	57
108.9	59.5	1530.2	0.04584	0.2297	3.12	62
118.0	64.5	1526.6	0.04437	0.2174	3.34	67
127.2	69.5	1524.8	0.04284	0.2112	3.55	72
136.3	74.5	1522.6	0.04074	0.2037	3.75	77
145.5	79.5	1522.2	0.04047	0.2024	3.96	82
154.6	84.5	1521.7	0.04012	0.2006	4.16	87
163.8	89.5	1521.8	0.04012	0.2009	4.36	92
172.9	94.5	1521.9	0.04026	0.2013	4.56	97
182.3	99.5	1521.8	0.04019	0.1608	4.72	105
201.3	110.0	1522.6	0.04012	0.4685	5.19	120
237.9	130.0	1522.8	0.04012	0.8174	6.00	140
274.5	150.0	1520.3	0.03950	0.7900	6.80	160
311.1	170.0	1518.2	0.03773	0.7546	7.55	180
347.7	190.0	1516.0	0.03683	0.7246	8.28	200
384.3	210.0	1508.8	0.03500	0.6860	8.98	220
420.9	230.0	1505.0	0.02971	0.5742	8.57	235
439.2	240.0	1502.0	0.02666	0.7100	9.28	250
475.8	260.0	1502.7	0.02114	0.5373	9.28	265
494.1	270.0	1503.8	0.02153	0.7123	10.00	270

(Lot 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

STA 32

CORRECTIONS IN FEET, FATHOMS

FORM C&GS-117
(11-65)

U.S. DEPARTMENT OF COMMERCE
EBSA
COAST AND GEODETIC SURVEY

VELOCITY CORRECTIONS

Ship DISCOVERER

LODNE G TAYLOR

Comdg.

These corrections are to be used

between 3 OCT 1967 and 20 OCT 1967

in the locality LAT 32° 11' N

LONG 076° 56' W

for hydrographic surveys Nos. SP-AMIC-11-67

(For deep water add a 0 to these figures)

DEPTHS IN FATHOMS

CORR. DEPTH

1.5 113

6 140

7 168

8 195

9 223

10 258 ✓

11 308 ✓

12 372 ✓

13 445 ✓

14 524 ✓

15 607 ✓

TIME (MIN) LAYER DEPTH	DEPTH LAYER	WATER VELOCITY M/SEC	COLLECTION FACTORS	LAYER COLLECTION FATHOMS	DEPTH COLLECTION FATHOMS	APPLICABLE DEPTH FATHOMS
5.2	4.5	1542.9	10.05101	10.2751	0.27	7
17.1	9.5	43.1	5475	2738	0.55	12
26.5	14.5	43.1	5475	2728	0.82	17
35.7	19.5	43.2	5475	2741	1.09	22
44.8	24.5	43.4	5475	2745	1.37	27
54.0	29.5	43.5	5475	2752	1.64	32
63.1	34.5	43.7	5516	2758	1.92	37
72.3	39.5	43.8	5523	2762	2.20	42
81.4	44.5	43.2	5482	2741	2.47	47
90.6	49.5	42.8	5454	2721	2.74	52
99.7	54.5	42.3	5420	2710	3.01	57
108.9	59.5	41.0	5332	2666	3.28	62
118.0	64.5	39.5	5229	2615	3.54	67
127.2	69.5	38.3	5147	2574	3.80	72
136.3	74.5	37.8	5112	2556	4.06	77
145.5	79.5	36.0	4990	2495	4.31	82
154.6	84.5	32.8	4711	2386	4.54	87
163.8	89.5	32.0	4716	2358	4.78	92
172.9	94.5	30.3	4600	2300	5.01	97
180.3	98.5	29.0	4511	1929	5.19	105
201.3	110	26.4	4234	4984	5.69	120
237.9	130	22.3	4053	8106	6.41	140
274.5	150	20.6	3937	7874	7.20	160
311.1	170	18.5	3794	7588	8.00	180
347.7	190	15.2	3568	7136	8.67	200
384.3	210	11.3	3301	6602	9.32	220
420.9	230	06.2	2953	5906	9.92	235
439.2	240	02.7	2714	2714	10.19	250
475.8	260	1500.5	2563	5126	10.70	265
494.1	270	1498.3	2447	2447	10.95	285
549.0	300	95.3	2208	6624	11.61	325
640.5	350	1493.0	10.02051	10.255	12.69	375

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

6 STA. 407

CORRECTIONS IN FEET, FATHOMS

FORM CGS-117
(11-65)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
ESSA

VELOCITY CORRECTIONS

Ship Discoverer

Lorne Taylor

Comdr.

These corrections are to be used

between 3 Oct 1967 and 20 Oct 1967

in the locality LAT 32° 28' N

LONG 078° 25' W

for hydrographic surveys Nos. SP-AMC-11-67

(For deep water add a 0 to these figures)

DEPTH IN FATHOMS

correction to depth

± 4.5 fa	101 fa	+ 11.0	306
5.0	119	12.0	336
5.5	135	13.0	365.5
6.0	148		
7.0	181		
8.0	216		
9.0	246		

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 7 X 10 INCHES

MID DEPTH OF EACH LAYER		LAYER VELOCITY M/SEC	CORRECTION FACTOR	LAYER CORRECTION FATHOMS	DEPTH CORRECTIONS FATHOMS	APPLICABLE DEPTH FATHOMS
METERS	FATHOMS					
8.2	4.5	1541.6	+0.05273	+0.2687	0.27	7
17.4	9.5	41.7	5380	2690	0.54	12
26.5	14.5	41.9	5393	2697	0.81	17
35.7	19.5	42.1	5407	2704	1.08	22
44.8	24.5	42.2	5414	2707	1.35	27
54.0	29.5	42.3	5420	2710	1.62	32
63.1	34.5	42.0	5400	2700	1.89	37
72.3	39.5	40.8	5318	2659	2.16	42
81.4	44.5	38.9	5158	2594	2.41	47
90.6	49.5	38.0	5126	2563	2.67	52
99.7	54.5	36.4	5017	2509	2.72	57
108.9	59.5	33.7	4733	2367	3.16	62
118.0	64.5	31.7	4606	2348	3.39	67
127.2	69.5	30.8	4634	2317	3.63	72
136.3	74.5	29.0	4511	2256	3.85	77
145.5	79.5	27.6	4416	2208	4.07	82
154.6	84.5	24.4	4197	2099	4.28	87
163.8	89.5	22.0	4033	2017	4.48	92
172.9	94.5	21.6	4005	2003	4.68	97
180.3	98.5	21.5	3999	2000	4.88	105
201.3	110	19.0	3828	4402	5.28	120
237.9	130	1511.2	+0.03295	+0.6590	5.98	140

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

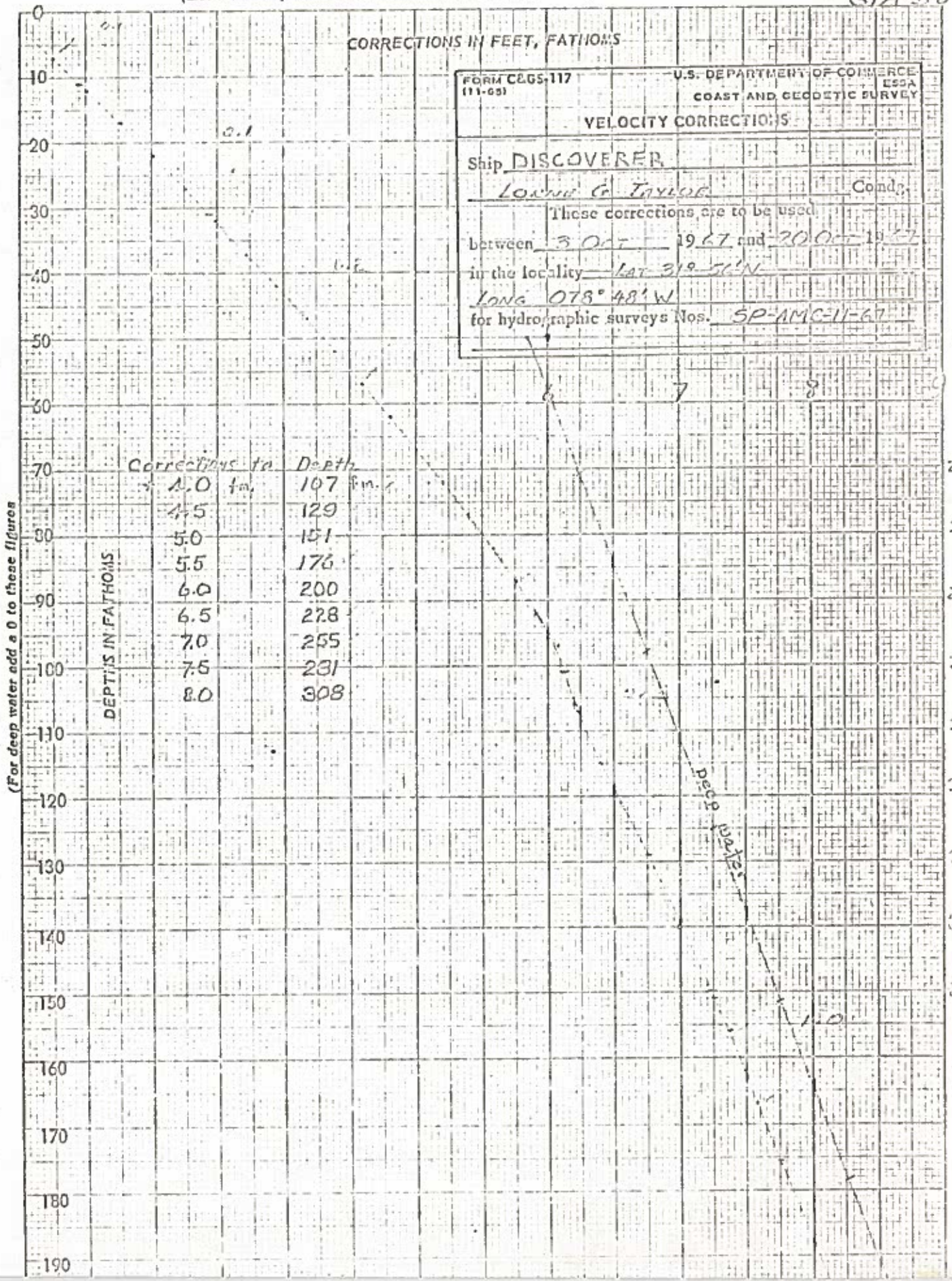
STA 50

CORRECTIONS IN FEET, FATHOMS

FORM C&GS-117 (11-65)	U.S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY
VELOCITY CORRECTIONS	
Ship <u>DISCOVERER</u>	Comdg. _____
These corrections are to be used	
between <u>3 Oct 1967</u> and <u>20 Oct 1967</u>	
in the locality <u>LAT 31° 51' N</u>	
<u>LONG 078° 48' W</u>	
for hydrographic surveys Nos. <u>SP-AMC-11-67</u>	

(For deep water add a 0 to these figures)

DEPTHS IN FATHOMS	Corrections to Depth
4.0 fms	107 fms
4.5	129
5.0	151
5.5	176
6.0	200
6.5	228
7.0	255
7.5	281
8.0	308

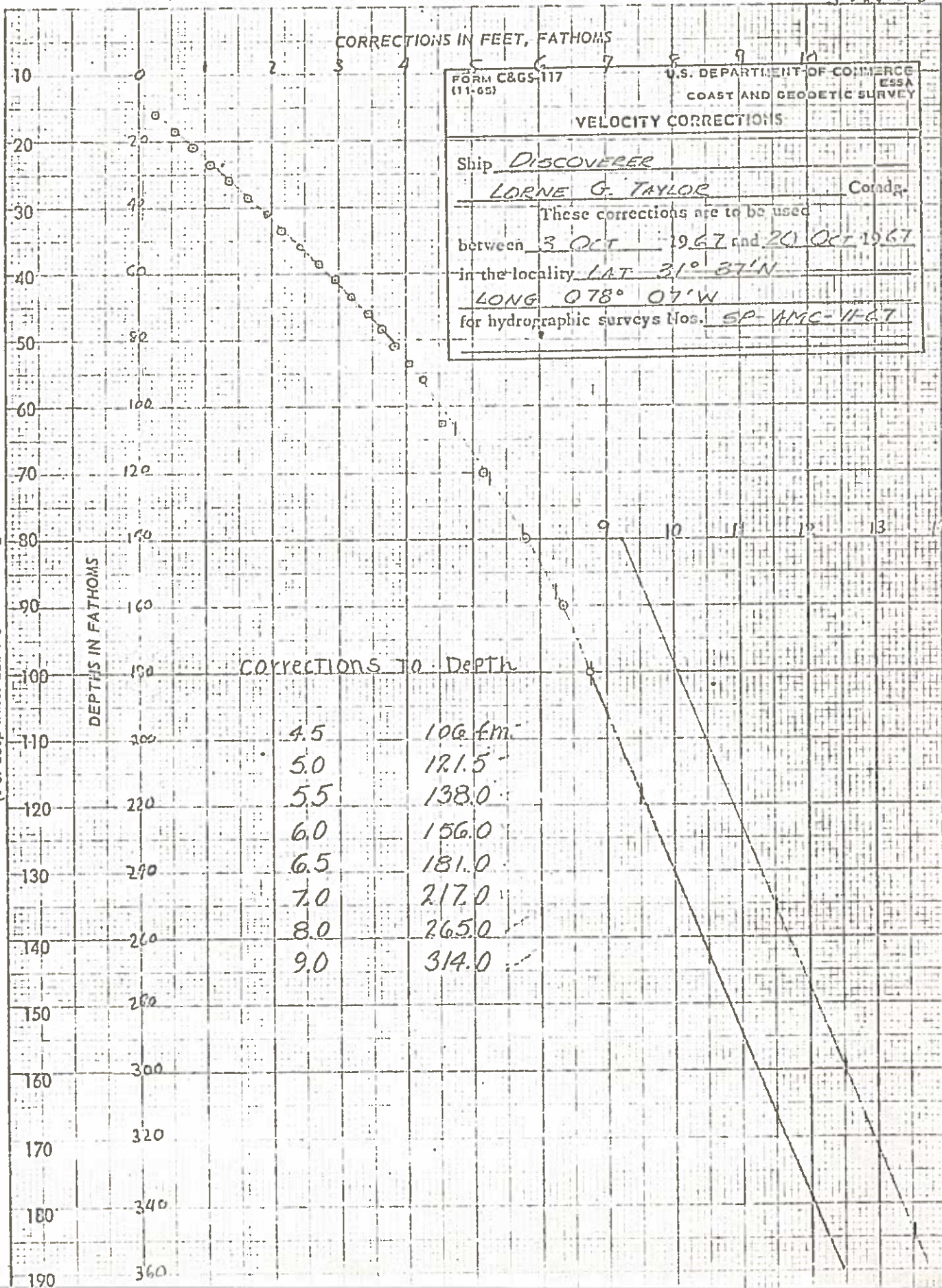


MADE IN U.S.A.
 KEUFFEL & ESSER CO.
 7 X 10 INCHES
 40 X 40 TO 100 X 100
 NO. 1470

MID DEPTH OF EACH LAYER METERS	EACH LAYER FATHOMS	LAYER VELOCITY M/SEC	CORRECTION FACTOR	LAYER CORRECTION FATHOMS	DEPTH CORRECTION FATHOMS	APPLICABLE DEPTH FATHOMS
8.2	4.5	15.39	1.005202	0.2601	0.26	1
17.4	9.5	38.6	5167	2584	0.52	17
26.5	14.5	37.7	5106	2553	0.77	17
35.7	19.5	35.7	4969	2485	1.02	22
44.8	24.5	33.2	4799	2400	1.26	27
54.0	29.5	30.7	4628	2314	1.49	32
63.1	34.5	29.8	4566	2283	1.72	37
72.3	39.5	29.5	4546	2273	1.95	42
81.4	44.5	27.0	4375	2188	2.17	47
90.6	49.5	26.5	4341	2171	2.39	52
99.7	54.5	25.6	4279	2140	2.60	57
108.9	59.5	23.6	4142	2071	2.81	62
118.0	64.5	22.0	4033	2017	3.01	67
127.2	69.5	21.2	3978	1989	3.21	72
136.3	74.5	19.7	3876	1938	3.40	77
145.5	79.5	16.7	3671	1836	3.58	82
154.6	84.5	15.0	3554	1777	3.76	87
163.8	89.5	09.9	3206	1603	3.92	92
172.9	94.5	09.0	3144	1572	4.08	97
180.3	99.5	07.0	3009	1503	4.20	106
201.3	110	15.035	2768	3183	4.52	121
237.9	130	14.966	2297	4594	4.98	140
274.5	150	14.914	1941	3882	5.37	156
295.0	161	14.910	1914	3810	5.58	167

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

STA 58



No. 7 X 10 INCHES
 H. C. WATKINS & CO.

MID DEPTH OF EACH LAYER METERS	EACH LAYER FATHOMS	LAYER VELOCITY M/SEC	CORRECTION FACTOR	LAYER CORRECTION FATHOMS	DEPTH CORRECTION FATHOMS	APPLICABLE DEPTH FATHOMS
8.2	4.5					7
17.4	9.5	12.42.5	100.5434	10.2717	+0.27	12
26.5	14.5	12.6	5441	2721	.54	17
35.7	19.5	12.8	5454	2727	.82	22
44.8	24.5	12.9	5461	2731	1.09	27
54.0	29.5	13.0	5468	2734	1.36	32
63.1	34.5	13.2	5482	2741	1.64	37
72.3	39.5	13.0	5468	2734	1.91	42
81.4	44.5	11.6	5373	2687	2.18	47
90.6	49.5	10.0	5263	2632	2.44	52
99.7	54.5	8.6	5099	2550	2.70	57
108.9	59.5	8.2	5004	2502	2.95	62
118.0	64.5	8.0	4990	2495	3.20	67
127.2	69.5	8.0	4921	2461	3.44	72
136.3	74.5	8.8	4771	2386	3.68	77
145.5	79.5	8.0	4648	2324	3.91	82
154.6	84.5	8.9	4552	2276	4.14	87
163.8	89.5	8.9	4368	2184	4.36	92
172.9	94.5	8.1	4040	2020	4.56	97
180.3	98.5	8.2	3810	1524	4.63	105
201.3	110	16.8	3677	5228	5.15	120
237.9	130	10.2	3227	6454	5.79	140
274.5	150	15.02.0	2734	5468	6.34	160
311.1	170	1.196.0	+0.02736	+0.4512	6.76	180



U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
XXXXXXXXXXXXXXXXXXXX

RESEARCH LABORATORIES
LAND AND SEA INTERACTION LABORATORY (LASIL)
439 WEST YORK STREET
NORFOLK, VIRGINIA 23510

IN REPLY REFER TO:

June 9, 1969

Dr. William G. Melson
Division of Petrology & Volcanology
Department of Mineral Sciences
Smithsonian Museum
Washington, D.C.

Dear Dr. Melson:

I am forwarding to the Smithsonian Museum a collection of manganese and phosphate concretions, coral and sediment samples recovered by the ESSA Atlantic Oceanographic Laboratories during a dredging survey of the Blake Plateau. This shipment consisting of three crates with a total weight of 600 pounds contains many fine specimens of marine minerals and represents an unparalleled collection of samples from this area.

The enclosed sheets contain the positions and depths for each station location. A sample identification card with each sample gives the station location as the 1st digit. Any following letter denotes the dredge which recovered that sample, i.e. 13-A means station 13, 1st dredge; 13-B means station 13, second dredge, and so on. Any numbers following those letters represent a specific dredge sample breakdown into component sample types.

If there are any questions concerning the sample designation code or on any other points, please call me via FTS at Norfolk, Virginia, 703 627-7327. I trust you will achieve maximum value from this unique collection.

Sincerely,

J. Bruce Grant

cc: Harris B. Stewart, Jr.
Director, AOL

Rec'd EDS

JUN 23 1969

Copies sent to
Capt Tonkel (CEAS)
Dr. Jacobs (EDS)
Dr. Miller (AOL-146EA)

Stewart
file 14(F)

USC 6655 DISCOVERER
OCT 1967
BLAKE PLATEAU

33° 30'

33°

32° 30'

32° N

76° W

77

78° W

03030016

Faint, illegible handwritten text, possibly bleed-through from the reverse side of the page.



U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
~~KOOSTAN AND KIOBENTIX SURVEY~~

RESEARCH LABORATORIES
LAND AND SEA INTERACTION LABORATORY (LASIL)
439 WEST YORK STREET
NORFOLK, VIRGINIA 23510

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June 9, 1969

Dr. William G. Melson
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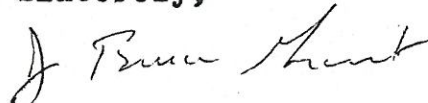
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Sincerely,


J. Bruce Grant

cc: Harris B. Stewart, Jr.
Director, AOL

111388

July 1, 1969

ACCESSION FILE
DO NOT REMOVE

Dr. J. Bruce Grant
Atlantic Marine Center, LASIL, ESSA
439 West York Street
Norfolk, Virginia 23510

Dear Dr. Grant:

Today we received your collection of sea floor materials from the Blake Plateau. I wish to thank you for sending them to us, and will keep you informed about any important data which may come to light about the materials. These collections will be entered into our Oceanic Rock Reference Collection, and will be available for study and reference use. Our normal policy is to let the samples be examined by any professional researchers.

Sincerely,

William G. Nelson
Associate Curator
Division of Petrology & Volcanology

cc: I. E. Wallen
H. Banks ✓
T. Simkin

WGM/mpc

ACCESSION FILE
DIV. PETROLOGY & VOLCANOLOGY

111388

<u>STATION</u>	<u>LATITUDE</u> ^N	<u>LONGITUDE</u> ^W	<u>DEPTH (m)</u>
1	30°30.5	79°25.4	802
2A	30°29.5	79°05.6	786
2B	30°30.7	79°04.5	779
3A	30°29.4	78°45.3	794
3B	30°28.8	78°46.1	790
4A	30°28.9	78°26.7	800
4B	30°28.8	78°26.4	800
5A	30°29.6	78°07.0	814
5B	30°30.9	78°06.2	830
6A	30°29.6	77°49.6	800
6B	30°30.0	77°48.7	800
7A	30°29.9	77°28.4	860
7B	30°29.6	77°26.4	883
8	Cancelled		
9	30°47.4	77°32.4	915
10A	30°56.1	77°32.9	900
10B	30°55.5	77°32.4	900
11A	31°06.0	77°53.5	850
11B	31°05.5	77°54.1	850
12	30°49.6	77°50.9	855
13A	30°47.9	78°09.6	840
13B	30°47.3	78°10.3	840
14A	Dredge lost, winch failure		
14B	31°04.5	78°10.3	817
15	30°59.4	78°31.3	780
16	30°47.9	78°29.7	860
17	30°48.7	78°47.8	820
18A	31°00.3	78°47.9	781
18B	30°58.2	78°49.1	794
19A			735
19B			750
19C	30°56.1	79°07.6	728

ACCESSION ROOM
DIV. PETROLOGY & VOLCANOLOGY

ACCESSION FILE
DO NOT REMOVE

<u>STATION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH (m)</u>
20A			743
20B	30°48.3	79°07.9	750
21	30°49.5	79°29.3	792
22	30°58.1	79°26.4	722
23	31°07.3	79°11.8	689
24	31°15.0	78°55.2	517
25A	31°18.9	78°29.1	565
25B	31°18.8	78°29.3	565
26	31°17.7	78°10.3	690
27	31°18.5	77°50.2	810
28	31°17.1	77°32.7	870
29	31°18.6	77°18.4	1090
30	31°35.3	77°11.0	1166
31	31°57.2	77°01.5	1066
32	32°11.1	76°56.3	980
33	32°25.6	77°49.2	
34	32°38.2	76°45.8	804
35	32°39.2	76°53.3	706
36	32°38.4	77°15.5	525
37	32°37.9	77°30.9	399
38	32°38.8	78°11.6	299
39A	32°38.6	78°12.0	199
39C	32°38.5	78°11.5	
40	32°27.6	78°23.4	260
41	32°28.6	78°06.1	302
42A	32°26.7	77°47.8	399
42B	32°25.8	77°49.0	388
43	32°28.1	77°28.3	530

<u>STATION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH (m)</u>
44A	32°28.2	77°08.0	700
44B	32°29.4	77°09.3	
45	32°11.2	77°09.0	850
46	32°11.7	77°27.6	690
47A	32°12.4	77°47.9	518
47B	32°12.6	77°47.6	519
48A	32°10.4	78°07.3	446
48B	Dredge bag torn		
48C	32°10.4	78°07.3	446
49A	32°10.7	78°26.0	329
49B	32°10.2	78°26.7	
50A	Dredge not on bottom		
50B	31°57.0	78°51.0	400
51	31°52.6	78°34.7	470
52A	31°52.8	78°14.1	616
52B	31°56.7	78°14.0	589
53A	31°55.5	77°50.4	660
53B	31°56.9	77°01.9	660
54	31°56.9	77°31.7	840
55A	31°54.8	77°12.6	860
55B	31°56.5	77°11.8	924
56A	31°36.6	77°28.5	890
56B	31°37.4	77°29.2	890
57A	31°37.5	77°46.7	710
57B	31°36.9	77°47.7	710
58A	31°36.3	78°05.2	636
58B	31°35.2	78°04.5	626
58C	31°35.8	78°00.4	600
58D	31°35.7	78°03.9	576
59A			531
59B	31°35.9	78°27.6	503
60	31°33.9	78°59.7	200-400
61	31°37.6	79°02.8	460
62A	31°19.0	79°08.7	500
62B	31°18.9	79°10.0	485

<u>STATION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH (m)</u>
63A	30°34.0	77°37.9	830
63B	30°34.5	77°36.8	834
64	30°36.9	77°19.7	1100
65A	30°53.1	77°19.8	1191
65B	30°53.5	77°19.3	1317
66A	31°08.0	77°20.5	1086
66B	31°08.5	77°20.4	1119
66C	31°08.1	77°21.2	1094
67	30°38.8	77°58.7	849
68	30°47.5	78°47.9	838
69	30°37.0	78°34.3	805
70	30°37.2	79°06.5	790
71	30°14.7	78°58.9	786
72			

111388

STATION	LATITUDE	LONGITUDE	DEPTH (m)
111388 1	30°30.5	79°25.4	802
111389 2A *	30°29.5	79°05.6	786
111396 2B *	30°30.7	79°04.5	779
111391 3A *	30°29.4	78°45.3	794
111392 3B	30°28.8	78°46.1	790
111393 4A	30°28.9	78°26.7	800
111394 4B	30°28.8	78°26.4	800
111395 5A	30°29.6	78°07.0	814
111396 5B	30°30.9	78°06.2	830
111397 6A *	30°29.6	77°49.6	800
111398 6B	30°30.0	77°48.7	800
111399 7A	30°29.9	77°28.4	860
111400 7B	30°29.6	77°26.4	883
8	Cancelled		
111401 9	30°47.4	77°32.4	915
111402 10A	30°56.1	77°32.9	900
111403 10B	30°55.5	77°32.4	900
111404 11A *	31°06.0	77°53.5	850
111405 11B *	31°05.5	77°54.1	850
111406 12 *	30°49.6	77°50.9	855
111407 13A	30°47.9	78°09.6	840
111408 13B *	30°47.3	78°10.3	840
111409 14A	Dredge lost, winch failure		
111409 14B *	31°04.5	78°10.3	817
111410 15 *	30°59.4	78°31.3	780
111411 16 *	30°47.9	78°29.7	860
111412 17 *	30°48.7	78°47.8	820
111413 18A	31°00.3	78°47.9	781
111414 18B	30°58.2	78°49.1	794
111415 19A *			735
111416 19B			750
111417 19C *	30°56.1	79°07.6	728

14-81*

13A-7*
13A-4*
13A-3*

14B-4*

16A*

*

*

check on 62A-1

ACCESSION ROOM
DIX PETROLOGY & VOLCANOLOGY
ACCESSION FILE
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<u>STATION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH (m)</u>
111418 20A			743
* 111419 20B	30°48.3	79°07.9	750
* 111420 21	30°49.5	79°29.3	792
111421 22	30°58.1	79°26.4	722
111422 23 ^{22A} *	31°07.3	79°11.8	689
111423 24	31°15.0	78°55.2	517
111424 25A ^{24A} *	31°18.9	78°29.1	565
111425 25B*	31°18.8	78°29.3	565
111426 26	31°17.7	78°10.3	690
26A-5*			
111427 27*	31°18.5	77°50.2	810
111428 28*	31°17.1	77°32.7	870
* 111429 29	31°18.6	77°18.4	1090
111430 30	31°35.3	77°11.0	1166
111431 31	31°57.2	77°01.5	1066
111432 32*	32°11.1	76°56.3	980
111433 33	32°25.6	77°49.2	
111434 34	32°38.2	76°45.8	804
111435 35	32°39.2	76°53.3	706
111436 36	32°38.4	77°15.5	525
111437 37	32°37.9	77°30.9	399
111438 38 ^{37A} *	32°38.8	78°11.6	299
111439 39A	32°38.6	78°12.0	199
111440 39C*	32°38.5	78°11.5	
111441 40*	32°27.6	78°23.4	260
111442 41	32°28.6	78°06.1	302
111443 42A*	32°26.7	77°47.8	399
111444 42B*	32°25.8	77°49.0	388
111445 43*	32°28.1	77°28.3	530

<u>STATION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH (m)</u>
111446 44A	32°28.2	77°08.0	700
111447 44B	32°29.4	77°09.3	
111448 45	32°11.2	77°09.0	850
111449 46 *	32°11.7	77°27.6	690
111450 47A	32°12.4	77°47.9	518
111451 47B	32°12.6	77°47.6	519
111452 48A *	32°10.4	78°07.3	446
48B *	Dredge bag torn		
111453 48C *	32°10.4	78°07.3	446
111454 49A *	32°10.7	78°26.0	329
111455 49B	32°10.2	78°26.7	
111456 50A	Dredge not on bottom		
111456 50B	31°57.0	78°51.0	400
111457 51 *	31°52.6	78°34.7	470
111458 52A	31°52.8	78°14.1	616
111459 52B *	31°56.7	78°14.0	589
111460 53A *	31°55.5	77°50.4	560
111461 53B *	31°56.9	77°01.9	660
111462 54	31°56.9	77°31.7	840
111463 55A *	31°54.8	77°12.6	860
111464 55B *	31°56.5	77°11.8	924
111465 56A	31°36.6	77°28.5	890
111466 56B	31°37.4	77°29.2	890
111467 57A *	31°37.5	77°46.7	710
111468 57B *	31°36.9	77°47.7	710
111469 58A	31°36.3	78°05.2	636
111470 58B	31°35.2	78°04.5	626
111471 58C *	31°35.8	78°00.4	600
111472 58D	31°35.7	78°03.9	576
111473 59A			531
111474 59B *	31°35.9	78°27.6	503
111475 60 *	31°33.9	78°59.7	200-400
111476 61 *	31°37.6	79°02.8	460
111477 62A	31°19.0	79°08.7	500
111478 62B	31°18.9	79°10.0	485

<u>STATION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH (m)</u>
11147963A	30°34.0	77°37.9	830
11148063B *	30°34.5	77°36.8	834
11148164 *	30°36.9	77°19.7	1100
11148265A	30°53.1	77°19.8	1191
11148365B	30°53.5	77°19.3	1317
11148466A 66A 111509	31°08.0	77°20.5	1086
11148566B	31°08.5	77°20.4	1119
11148666C *	31°08.1	77°21.2	1094
11148767	30°38.8	77°58.7	849
11148868	30°47.5	78°47.9	838
11148969 *	30°37.0	78°34.3	805
11149070	30°37.2	79°06.5	790
11149171	30°14.7	78°58.9	786