

Line: 25?

RECORDING LOG  
MCS

BPI: 800

[illegible]

R/V ROBERT D. CONRAD

Cruise: V 36-13

Line: 25

# RECORDING LOG

MCS

Benham Rise

DFS IV

Format: SEFB

BPI: 800

Date Z	Tape #	Shot Point #	Time Z	Trip Delay ms	Depth FM	Pop Rate sec	Samp. Rate ms	Rec. L. ms	depth eel transducers Comments
7/4/80	9181	001	0755	2000	=1200	18.6	4	12000	meat depth (?), 36, 44, 40 FM
	9182	094	0824	"					
	9183	127	0852	"	1450	"	"	"	
	9184	283	0922	"		"	"	"	missed 5 shots
	9185	375	0951	"		"	"	"	
	9186	467	1014	"		"	"	"	
		496	1028	3000	~1700 fm				go to 3 m. delay
	9187	561	1048	"		"	"	"	
	9188	664	1114	"		"	"	"	missed 6 shots
	9189	757	1148	"		"	"	"	
	9190	851	1217	"	~1900	"	"	"	
	9191	947	1247	"	~2000	"	"	"	missed 1 shot
	9192	1043	1316	"		"	"	"	missed 1 shot
			1319						D.T. (near)?, 38, 34, 40 (far)
	9193	1136	1345	"	~2100	"	"	"	missed 1 shot
	9194	1230	1414	"	2100	"	"	"	Sonobuoy # 165 (over side of 1405)
	9195	1325	1444	"		"	"	"	missed 1 shot
	9196	1418	1512	"	1800	"	"	"	missed 1 shot
	9197	1514	1542	"	1580	"	"	"	missed 5 shots
	9198	1614	1612	"	1660	"	"	"	

Vema  
R/V ROBERT D. CONRAD  
Cruise: V 3613  
Line: 25

RECORDING LOG  
MCS  
Luzon Margin

DFS IV  
Format: SEG B  
BPI: 800

Date GMT	Tape # C	Shot Point #	Time GMT	Trip Delay ms	Depth FM	Pop Rate s	Samp. Rate ms	Rec. L. ms	Comments
7/4/80	9199	1709	1642	3000	1650	18.0	4	12K	Perfect tape change!
	9200	1802	1711	"	1600	"	"	"	A/C @ 1730 262
	9201	1896	1740	"	1600	"	"	"	eel depth transducer reading Far - 40 ft, AS
	9202	2000	1830		2000	"			missed 10 shots - bad tape-
	"	2085	1839	3000/4000		"			change TB delay to 4000 ms
	9203	2093	1841	4000	2370	"			
		2175	1906	4000/5000					change TB delay to 5000 ms
	9204	2188	1910	5000	2500	"	"	"	
	9205	2284	1939	"	2400	"	"	"	missed 2 shots
	9206	2378	2009	"	2300				
	9207	2411	2038	"	2280				
	9208	2568	2107	"	2610				
	9209	2666	2137	"	2660				
	9210	2759	2206	"	2730	"	"	"	~ Bf some noise in eel which comes right
	9211	2852	2235	"	2750				
	9212	2945	2304	"	2750				
	9213	3038	2332	"	2700				
7/5/80	9214	3132	0001Z		2630				
	9215	3226	0030		2500				
	9216	3330	0059		2530				Missed one shot on change.

R/V ROBERT D. CONRAD

Cruise: V 36-13

Line: 25

## RECORDING LOG

MCS

Luzon  
margin

DFS IV

Format: SEG-B

BPI: 500

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth FM	Pop Rate s	Samp. Rate ms	Rec. L. sec	Comments
7/5/80	9216	30126		5000		18.0	4	12K	accidentally turned off Alak Box - missed a couple of shots. May be off 2.8%
	<del>9217</del>	<del>3416</del>							
	9217	3416	0129	5000	2400	18.0	4	12K	Missed two shots
	"	3479	0150	5000/4000					Change TB delay from 5 sec. to 4 sec.
	9218	3511	0200	4000	2000				Missed shot 3670 (1 shot)
	9219	3607	0229	4000	1870				Missed shot 3606
	"	3626	0235						Command eel to rise to <sup>12 ft</sup> <del>surface</del> to avoid a feeding buoy (was at = 35 ft)
		3676	0250						Command eel to go to 30 ft.
	9220	3704	0300	4000	1840	18	4	12K	missed 1 shot
	9221	3797	0328	4000	1640	18	4	12K	
	<del>9222</del>	3799	0328	3000		"	"	"	go to 3.0 sec. delay on recorder
	9222	3891	0356	3000	1360	"	"	"	
		3926	0407	2000					go to 2.0 sec. delay
		3955	0416						streamer depths: -, 32', 28', 32' (near fly)
	9223	3992	0430	2000	920 fm	"	"	"	missed 47 (!) shots
		4007	0432	1000					go to 1.0 sec. delay
	<del>9224</del>	<del>4101</del>	<del>0501</del>						go to 0.2 sec. delay, END LINE 25
	last shot	4092	0458						END LINE 25

VEMA  
R/V ROBERT D. CONRAD  
Cruise: V3613  
Line: ~~25~~ 26

# RECORDING LOG

MCS

LUZEN  
MARGIN

DFS IV

Format: SEGB

BPI: 800

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth Fm	Pop Rate S	Samp. Rate ms	Rec. L. ms	Comments
7/5/80	9224	<del>0000</del> 0075	0542	0000	400	18.0	4	12K	START LINE 26
		0075	0605	1000					change delay to 1000ms
	9225	0094	0610	1000		"	"	"	
		01089	0615	2000					change delay to 2000ms
			0617						lost 114 / lost 6 SP
	9226	0120	0618	2000	1100	"	"	"	SB #166A @ 0629 z
			0639						SB #166B @ 0639 z
	9227	213	0647	2000	1100				
		252	0659	1000					change delay to 1000ms
		260	0701	0000					change delay to 0 ms
		275	0706	1000		"	"	"	
	9228	306	0716	1000	900	"	"	"	Missed shot 305
			0736			"	"	"	c/c to 315 (from 330)
	9229	A10	<del>0745</del>	1000	700	"	"	"	Missed shot 309, 400 --- 409
		242							TPX 2 not working - must change
	9230	426	0753	1000	700 fm	"	"	"	to TPX-1
	9231	519	0821	1000	550 fm				
	9232	611	0850	1000	570 fm	"	"	"	
		640		0000		"	"	"	change to 0.0 sec. delay
	9233	703	0918	"	460	"	"	"	

Line: 26

M C S

Lesson Margin

BPI: 800

[illegible]

Vema  
R/V ROBERT D. CONRAD  
Cruise: V 3613  
Line: 27

RECORDING LOG  
MCS  
Loran Margin

DFS IV  
Format: SEB  
BPI: 800

(6)

Date	Tape #	Shot Point #	Time	Trip Delay	Depth	Pop Rate	Samp. Rate	Rec. L.	Comments
7/5/8	9234	0001	1005	0	960	18.0	4	12	
		0006	1007	2.0		"	"	"	add 2 sec. delay
		0058	1022	3.0		"	"	"	add 3 sec. delay
	9235	0095	1034	"	1340	"	"	"	
	9236	0189	1102	"	1360	"	"	"	
	9237	0283	1132	"	1320	"	"	"	
	9238	0376	1200	"	1250	"	"	"	
	9239	0470	1224	"	1320	"	"	"	
	9240	0564	1258	"	1750	"	"	"	
	9241	0658	1327	"	1870	"	"	"	
		0686	1338	4.0		"	"	"	change to 4.0 sec. delay
	9242	0751	1356	"	2040	"	"	"	
	9243	0845	1425	"	2040	"	"	"	bugy # 166
		0848	1426	"	-	"	"	"	bugy # 166 in water
	9244	0939	1454	"	2050	"	"	"	
	9245	1033	1523	"	2060	"	"	"	
	9246	1127	1552	"	2060	"	"	"	
	9247	1222	1622	"	2060	"	"	"	D.T. Near 32', 28', 34' Far
	9248	1316	1651	"	2050	"	"	"	
	9249	1410	1720	"	1800	"	"	"	A/C → 095 @ 1730

1745 CHANGE TO 3.0 sec delay

VEMA  
R/V ROBERT D. CONRAD

Cruise: U3613

Line: 27

RECORDING LOG  
MCS

E. LUZON MARGIN

DFS IV

Format: SEGB

BPI: 800

(7)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth FM	Pop Rate sec	Samp. Rate ms	Rec. Ls	Comments
7/5/80	9250	1504	1748	3000	1400	18.0	4	12K	1745 change to 3.0 sec delay
	9251	1631	1828	"	1300	"	"	"	35 shots lost - transport failed
	9252	1725	1857	"	1360	"	"	"	to start -
	9253	1819	1926	"	1450	"	"	"	
	9254	1912	1955	"	1535	"	"	"	
	9255	2006	2024	"	1550	"	"	"	
	9256	2100	2052	"	1825	"	"	"	pull
	"	"	"	"	"	"	"	"	Eel transducer depths: Far - 34 ft, 25 ft
	9257	2194	2121	"	2125	"	"	"	30 ft, head transducer not working
	9258	2288	2157	"	2025	"	"	"	
	"	2349	2209	3000/4000		"	"	"	Change TB delay from 3000 to 4000 ms
	9259	2465	2233	4000	2300	"	"	"	
	9259	2382	2210	4000	2300	"	"	"	
	"	2436	2236	4000/5000	"	"	"	"	Change TB delay from 4000 to 5000 ms
	9260	2475	2249	5000	2700				
	9261	2569	2317	"	2740				
	9262	2663	2346	"	2750				
	"	2753	0014						small until near end of log
7/6/80	9263	2756 <sup>49</sup>	0015		2710				AC to 100° from 0950°
Z	9264	2859	0047		2700	Note stage 20 not active			Missed = 9 or 10 shots on change



Line: 27

E. Luzon margin

BPI: 800

8

[illegible]

VEMA  
R/V. ROBERT D. CONRAD

Cruise: V36-13

Line: ~~13~~ 28

RECORDING LOG  
MCS

E. LUZEN MARGIN

DFS IV

Format: SEGB

BPI: 800

(9)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth fm	Pop Rate sec	Samp. Rate ms	Rec. L. ms	Comments
7/6/80	9268	1	0357	5000	2655	1.8	4	12K	START LINE 28 TPX1
		20	0403	6000					change delay to 6000 msec
		<del>92</del> 92							
63	9269	99	0427	6000	2720	"	"	"	lost 6 shots; TPX1 ran backwards after each shot!
			0439						SB #167A toward
68	9270	193	0457	6000	2720	"	"	"	
			0506						SB #167
			0520						adjusted SB adjustment lead - perhaps
68	9271	287	0526	6000	2720	"	"	"	[no signal before 0520]
60	9272	381	0555	6000	2640	"	"	"	
		447	0614	5000					change delay to 5000 msec
60	9273	475	0624	5000	2400	"	"	"	
		=477							replaced Timing Memory Card
63	9274	570	0653	<del>5000</del>	2520	"	"	"	in Black Box - some time break errors are showing up.
		595	0700	6000					change delay to 6000 msec
		649	0717	5000					change delay to 5000 msec
60	9275	668	0722	5000	2400	"	"	"	lost 3 shots; TPX2 advance?
		<del>677</del> 700	0733	4000					change delay to 4000 msec

581  
74  
675

VEMA  
R/V ROBERT D. CONRAD  
Cruise: V3613  
Line: 28

RECORDING LOG  
MCS

E LUZON MARGIN

DFS IV  
Format: SEGB  
BPI: 800

(10)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay msec	Depth fm	Pop Rate sec	Samp. Rate msec	Rec. L. msec	Comments
7/6/80	9275 (cont)	727	0741	4000		1.8	4	12K	streamer depth: near to far - 30, 30, 34 feet
		752	0749	3000					change delay to 3000 msec
4.0	9276	762	0752	3000	1600	"	"	"	
3.4	9277	856	0821	3000	1360	"	"	"	
		891	0832	2000					change delay to 2000 msec
3.1	9278	949	0850	2000	1240	"	"	"	
	9279	1041	0918	2K	1380	"	"	"	
	9280	1132	0947	"	1410	"	"	"	
	9281	1224	1015	"	1515	"	"	"	
		1254	1023	3K	—	"	"	"	change delay to 3 sec
		1303	1038	4K	—	"	"	"	change delay to 4 sec.
	9282	1317	1044	"	1870	"	"	"	
	9283	1412	1113	"	1990	"	"	"	
	9284	1504	1141	"	<del>1800</del> 2000	"	"	"	
	9285	1598	1210	"	<del>1800</del> 2000	"	"	"	
	9286	1691	1239	"	1985	"	"	"	
			1300						A/C to 260°
	9287	1785	1308	"	1980	"	"	"	
		1803	1314	"	—	"	"	"	Sonobuoy # 168 (SSQ11) launched
	9288	1878	1337	"	1970	"	"	"	

Vema  
R/V ROBERT D. CONRAD  
Cruise: V 3613  
Line: 28 (cont.)

RECORDING LOG  
MCS  
East Loran Margin

DFS IV  
Format: SEGB  
BPI: 800

Date	Tape #	Shot Point #	Time (GMT)	Trip Delay (m sec)	Depth (m)	Pop Rate (sec)	Samp. Rate (m.s)	Rec. L. (m.s)	Comments
7/6/80	9289	1972	1406	4K	1920	18	4	12K	Song buoy #168 (cont.)
	9290	2065	1435	"	1900	"	"	"	
		2152	1502	3K		"	"	"	change delay to 3 sec
	9291	2160	1504	"	1800	"	"	"	missed 1 shot
	9292	2254	1533	"	1720	"	"	"	
	9293	2348	1602	"	1650	"	"	"	
	9294	2442	1631	"	1520	"	"	"	
	9295	2538	1700	"	1625	"	"	"	Birds flying: (1) (2) (3) (4) x 32 30 34 (for)
	9296	2630	1729	"	1520	"	"	"	
	9297	2724	1758	"	1400 fm	"	"	"	AC → 250° change delay to 7 sec
	9298	702	?	3 → 5.0	1380	"	"	"	@ 1831 - tape unwinds MAYOR
	9299	2849	?	2 → 1.0	1080	"	"	"	MAY NOT HAVE RECORDED SHOTS
	9300	02942	1905	1.0	<del>1080</del> 800	"	"	"	# 9299 (FIRST files listed as # 9298)
		3022	1930			"	"	"	1853 change to 1.0 sec delay
						"	"	"	1930 AC → 170°
		3022	1930			"	"	"	3022 AT 1930 last
						"	"	"	shot of line 28
						"	"	"	
						"	"	"	
						"	"	"	

R/V <sup>Vema</sup> ROBERT D. CONRAD  
Cruise: V 3613  
Line: 29

# RECORDING LOG

M C S

East Loran Margin

DFS IV

Format: Seg B

BPI: 800

[illegible]

R/V ROBERT D. CONRAD

Cruise: 136-13

Line: 30

# RECORDING LOG 0056

MCS

E. Luzon margin

depth transducer  
eel depths  
head 40  
tail 35  
44

0930 DFS IV

Format: SE G-B

BPI: 800

(13)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth FM	Pop Rate	Samp. Rate ms	Rec. L <sub>s</sub>	Comments
7/6/80	9306	001	2336	1000	1100	15.0	4	12000	60 Hz hum still in Active section 10
7/7/80	9307	93	0005	1000	900	18.0	4	12000	
	9308	185	0038	1000	800				Tape ID not advanced on writ of tape 9308
	"	260	0056	1000/2000					increase TB delay to 2000 ms.
	9309	277	0101	2000	1450				
	9310	369	0130	2000	1500				
	"	378	0133		1500				ATC 095
	9311	461	0158	2000	1600				
	"	503	0211	2000/3000					increase TB delay to 3000 ms.
	9312	553	0227	3000	1750				missed 6 shots while changing tapes
		639	0253	4000					delay changed to 4000 msec
	9313	653	0258	4000	1840	"	"	"	
			0300						q/c 100 from 095
	9314	747	0327	4000	1840	"	"	"	
			0335						SB # 170A
		845	0346						SB # 170
	9315	850	0359	4000	1920	"	"	"	lost 4 shots
	9316	943	0427	4000	1960	"	"	"	
	9317	1037	0456	4000	2000	"	"	"	
	9318	1131	0525	4000	2000	"	"	"	

VEMA  
R/V ROBERT D. CONRAD  
Cruise: V3613  
Line: 30

RECORDING LOG  
MCS

E LIZEN MARGIN

(14)  
DFS IV  
Format: SEGB  
BPI: 800

	Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth fm	Pop Rate sec	Samp. Rate ms	Rec. L. ms	Comments
	7/7/80		1225	0537						a/c, to 080 from 100
51		9319	1230	0556	4000	2040	18.0	4	12K	lost 4 shots
			<del>1230</del>	0606						streamer (near) -, 42', 40', 42' far)
50		9320	1324	0625	4000	2000	"	"	"	
50		9321	1418	0654	4000	2000	"	"	"	
53		9322	1512	0723	4000	2120	"	"	"	
		11	1548	0734	5000					change delay to 5000 msec
54		9323	1606	0752	5000	2160	"	"	"	
54		9324	1699	0820	5000	2200	"	"	"	
50		9325	1793	0850	5000	2240	"	"	"	
		9326	1886	0918	"	2440	"	"	"	
				0914	4K		"	"	"	change delay to 4 sec
			1973	0945	3K		"	"	"	change delay to 3 sec.
		9327	1979	0947	"	1630	"	"	"	
			2064	1013	"		"	"	"	Bird Depth Near -, 40, 40, 44, far
		9328	2071	1015	"	1420	"	"	"	
		9329	2165	1044	4K	1790	"	"	"	change delay to 4 sec.
			2212	1054	5K		"	"	"	change delay to 5 sec.
		9330	2258	1113	"	2120	"	"	"	
		9331	2352	1142	"	2250	"	"	"	

BPI: 800

(15)

[illegible]





Vema  
R/V ROBERT D. CONRAD  
Cruise: V 3613  
Line: 32

# RECORDING LOG

MCS

Coron Margin

DFS IV

Format: SEG-13

BPI: 800

17

Date (GMT)	Tape #	Shot Point #	Time (GMT)	Trip Delay (msec)	Depth (fm.)	Pop Rate (sec)	Samp. Rate (msec)	Rec. L. (sec)	Comments
7/7/80	9341	0001	1647	5K	2510	18.0	4	12	Start Line 32
	9342	0096	1717	"	2480	"	"	"	Bird Depths: Near: - 40, 40, 44, FAR
	9343	0198	1748	"	2400	"	"	"	missed 10 shots on #9342
	9344	0273	1811	"	2430	"	"	"	# 9343 early fire #12 wrong
	9345	0367	1840	"	2520	"	"	"	- operator plg.
	9346	0461	1909	"	2450	"	"	"	
	9347	0555	1938	"	2440	"	"	"	head DT. bad.
	9348	0649	2007	"	2440	"	"	"	Birds - 42, 40, 44 (tail)
	9349	0707/3	2036	"	2215	"	"	"	
	—	0765	—	4K	2100	"	"	"	Change delay to 4 sec.
	9350	837	2106		2040				
	9351	931	2134		2000				TB delay not changed in time - bottom
	9352	1025	2203		1380				clipped at end of stage.
	"	1030		4K/3K					change TB delay from 4K to 3K
	"	1042		3K/2K					" 3K to 2K
	9353	1117	2232	2K	1360				
	"	1125	2259	2000/1000					change TB delay from 2000 to 1000
	9354	1209	2300	1000	1010				
	9355	1301	2329	"	1050				
	9356	1393	2357	"	990				

Vema  
R/V ROBERT D. CONRAD  
Cruise: V36-13  
Line: 32

# RECORDING LOG

MCS

Luzon Margin

DFS IV  
Format: SEG-B  
BPI: 800

(18)

Date	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth Fm	Pop Rate sec	Samp. Rate ms	Rec. L. ms	Comments
7/8/80	9356	1460	0018	1000	—	18.0	4	12000	A/C 250°
GMT	9357	1486	0026	1000	700 E	18.0	4	12000	missed 2 shots
	"	1540	0043	1000/0000					True track delay reduced to 0000 ms.
	9358	1580	0055	0000	600				
	9359	1672	0123	0000	610				
	"	1742	0145	0000/500					increase TB delay to 500 ms.
	9360	1766	0152	0000/500	600				missed 2 shots
	"		0152						SB 171 @ 0152 (SB 171A)
	"		0208						SB 171 @ 0208
	9361	1858	0221	500	600				
	9362	1951	0249	500	580	"	"	"	
	9363	2043	0318	500	560	"	"	"	
		2109	0334		560				SB 172 @ 0334
	9364	2136	0346	500	560	"	"	"	
	9365	2229	0415	500	560	"	"	"	
	9366	2322	0444	500	560	"	"	"	
	9367	2414	0512	500	560	"	"	"	
			0511						A/C 245
			0518						SB #173A @ 0518
	9368	2507	0541	500	560	"	"	"	

R/V ROBERT D. CONRAD  
Cruise: V36-13  
Line: 32

RECORDING LOG  
MCS

LUBEN MARGIN

4558  
42' near  
38' far  
42'

DFS IV  
Format: SEGB  
BPI: 8000

19

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth fm	Pop Rate s	Samp. Rate ms	Rec. L. ms	Comments
7/1/80			0538						SA #173 @ 0538
25	9369	2599	0609	500	500	18.0	4	12K	
U	9370	2692	0638	500	440	"	"	"	
10	9371	2784	0707	500	400	"	"	"	
			0708						A/C 270
		2808	0714	0000					decrease delay to 0min
7	9372	2877	0735	0	300	"	"	"	
	9373	2969	0804	0000	250	"	"	"	
5	9374	3062	0832	0	200	"	"	"	
	9375	3109	0847	0	440	"	"	"	lost 33 data - TP X2 locked up
			0852			"	"	"	SB #174 @ 0852
	9376	3202	0916	"	300fm	"	"	"	
	9377	3294	0944	"	270	"	"	"	
	9378	3386	1013	"	250	"	"	"	
		3445	1031						A/C to 3050
	9379	3477	1041	"	210	"	"	"	
			1043						S.B #175
	9380	3570	1109	"	200	"	"	"	
	9381	3662	1138	"	170	"	"	"	
	9382	3754	1206	"	110	"	"	"	

Verna  
R/V ROBERT-D. CONRAD  
Cruise: V 3613  
Line: 32

RECORDING LOG  
MCS  
Lozen Margin

DFS IV  
Format: SEGB  
BPI: 800

(20)

Date	Tape #	Shot Point #	Time (GMT)	Trip Delay (msec)	Depth (m)	Pop Rate (sec)	Samp. Rate (msec)	Rec. L. (msec)	Comments
7/5/50	9382	—	1224	0	—	180	4	12K	D.T. Near —, 42, 40, 42 Far
	9383	3846	1235	"	180	"	"	"	many parity errors, tape cut short
	9384	3891	1248	"	200	"	"	"	
			1259						S.B. #176 in the water
	<del>9385</del> 3434	3921	1317	"	110	"	"	"	
	9386	4074	1345	"	100	"	"	"	
	9387	4166	1413	"	220	"	"	"	
	9388	4259	1442	"	380	"	"	"	A/C → 280° @ 1447
	9389	4351	1510	"	630	"	"	"	S.B. #177 in water
	9390	4444	1539	"-7.0	1050	"	"	"	change to delay #4473 OVERVIEW LIGHT ON AT TIMES
	9391	4536	1607	1.0	1400	"	"	"	
	9392	4629	1636	"	1000	"	"	"	
	9393	4721	1705	"	1000	18/40.1	"	"	SPEED → S/A ship traffic #4800 After to 35
	9394	4813	1735	"	1400	27.0	"	"	ASD NEAR 38 30 34 FAR POP RATE 270
	9395	4905	1817	"	1400	37.0/18.0	"	"	A/S → 165 RPM'S #4908 Also start to 18.0 AT #4907
	9395	4939	1828	2.0	<del>1400</del> 1580	18.0	"	"	increase delay to 2.0 seconds
	9396	4997	1846	"	1500	"	"	"	increment S.P. file to #001 (1 step)
	9396	5074	1910	3.0	—	"	"	"	increase delay to 3.0 seconds
	9397	5090	1915	"	1560	"	"	"	
	9398	5184	1943	"	1720	"	"	"	

R/V ROBERT D. CONRAD

Cruise: V3613

Line: 32

## RECORDING LOG

MCS

LUZON MARGINS

DFS IV

Format: SEGB

BPI: 800

(21)

Date <i>cont</i>	Tape #	Shot Point #	Time (GMT)	Trip Delay (Sec)	Depth (fms)	Pop Rate (Sec)	Samp. Rate (n/sec)	Rec. L. (m/sec)	Comments
7/2/80	9399	5278	2012	3.0	1810	18.0	4	12 K	Depth transducer
	9400	5310	2040	"	1810	"	"	"	Birds <sup>seen</sup> - 40', 36', 42' tail
	9401	5462	2109		1810				
	9402	5556	2138		1510				
	"	5591	2149	2000/2000					decreased time break delay to 2000 <sup>ms</sup>
	9403	5650	2207	2100	1200				some parity errors on this tape.
	9404	5743	2236	<del>2000</del>	970				
	"	5757	2237	2000/1000					decrease Time break delay to 1000
	9405	5835	2304	1000	820				
	9406	5929	2333	1000	1000				
7/4/80	9407	6020	0002	1000	900				Tape ID not advanced on most of this tape.
	9408	6112	0030	1000	900				
	9409	6204	0059	1000	1030				
	"	6258							increase speed by 10 rpm.
	9410	6298	0128	1000	1160				missed 2 shots.
	"	6369	0150	1000/2000					increase TB delay to 2000 ms
	9411	6389	0156	2000	1220				
	9412	6482	0224	2000	1400				
	9413	6574	0253	2000	1300				
									Streamer near to far: - 40' 34' 40'

R/V ROBERT D. CONRAD

Cruise: V 36-13

Line: 32

# RECORDING LOG

MCS

N 63 m margin

streamer depth  
715  
near 32'  
for 34'  
26'

DFS IV

Format: SF-G-B

BPI: 800

(22)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay mSec.	Depth fm	Pop Rate sec	Samp. Rate mSec	Rec. L. mSec	Comments
35	9414	6668	0322	2000	1400	18.0	4	12K	↑ in position
	9415	<del>6721</del>	0338	2000	1500	"	"	"	lost 1 shot
370		6721							
		6792	0400	3000					change delay to 3000 msec
370	9416	6814	0407	3000	1500	"	"	"	
38	9417	6908	0436	3000	1520	"	"	"	
42	9418	7003	0505	3000	1680	"	"	"	
48	9419	7096	0534	3000	1800	"	"	"	
50	9420	7189	0603	3000	2000	"	"	"	
		7207	0608	4000					change delay to 4000 msec
51	9421	7282	0631	4000	2040	"	"	"	
		7301	0637			25.0			change pop rate - ship slows
49	9422	7376	0709	4000	1960	"	"	"	down for bad weather
51	9423	7469	0749	4000	2100	"	"	"	
	"	7514	0808			25.0 46.0			slow pop rate to 40.0 sec.
	"	7532	0820			44.0 30.0			change pop rate to 30 sec
	9424	7563	0836	4000	2240	30.0	"	"	
16		7594	0852	5K					change delay to 5 sec
	9425	7655	0923	5K	2240	"	"	"	
	9426	7749	1011	"	2240	"	"	"	

Line: 32

## M C S

Loan Margin

BPI: 500

23

[illegible]



[illegible]

Vema  
R/V ROBERT D. CONRAD  
Cruise: V36-13  
Line: 34

# RECORDING LOG MCS

Luzon margin

DFS IV

Format: ~~800~~ SEC  
B

BPI: 800

25

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay	Depth fm.	Pop Rate	Samp. Rate Sec	Rec. Lg m	Comments
5/12/80	9443	0001	0903	4 m	2250	18	4	12000	Start Line 34
		0029	0912	5		"	"	"	change to 5 sec. delay
		0092	0931	4		"	"	"	change to 4 sec. delay
	9444	0095	0932	"	2470	"	"	"	
	9445	0189	1001	"	1770	"	"	"	
	9446	0284	1031	"	1700 <del>2100</del>	"	"	"	
	9447	0377	1054	"	1850	"	"	"	
			1104						reduce rpm to 155
	9448	0472	1129	"	1970	"	"	"	
	9449	0566	1158	"	2020	"	"	"	
	9450	0660	1227	"	2140	"	"	"	
		0685	1235	5 m					change delay to 5 sec.
	9451	0753	1256	"	2260	"	"	"	
			1313						reduce rpm to 150
	9452	0847	1324	"	2320	"	"	"	
			1334		2360				Senobuoy # 179 DIT 204 2154.2 - FS
	9453	0939	1353	"	2490	"	"	"	- override 1-2 lights -
	9454	1041	1425	5.0/7.0	2520	"	"	"	missed #6 shots - some party error
	9455	1135	1453	4.0	25710	"	"	"	DELAY → 4.0 AT SHOT #1144 OVERDRIVE
	9456	1229	1522	4.0/3.0	1995	"	"	"	del → 3.0 — OVERDRIVE, PARTY AT #1318

R22 1551 3.0

VEMA  
R/V ROBERT D. CONRAD  
Cruise: V3613  
Line: 34

# RECORDING LOG

MCS

W. LUZON MARGIN

DFS IV

Format: SE6 B

BPI: 800

(26)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay	Depth fms	Pop Rate 32C	Samp. Rate ms	Rec. L. ms	Comments
7/12/80	9457	1322	1551	3.0	1680	18	4	12000	OVERDRIVE PARITY
	9458	1416	1630	"	1605	"	"	"	OVERDRIVE H/L 2070 H/S → slight increase FISH <sup>HEAR</sup> - 1630... <sup>FAR</sup>
	9459	1510	1649	3.0 → 2.0	1510	"	"	"	OVERDRIVE PARITY DELAY → 2.0 @ 1782
	9460	1604	1718	2.0	1350	"	"	"	OVERDRIVE
	9461	1696	1746	2.0 → 1.0	1160	"	"	"	OVERDRIVE PARITY DELAY → 1.0 @ 1788
	9462	1789	1815	1.0	985	"	"	"	little parity
	9463	1882	1844	1.0	<del>1035</del> 985	"	"	"	
	9464	1976	1913	1.0	1035	"	"	"	
	9465	2067	1941	1.0	1040	"	"	"	
	9466	2161	2010	2.0	1125	"	"	"	Delay → 2.0 @ 2011 ± 2163
	9467	2255	2039	2.0	1100	"	"	"	high parity - scuba brand tape?
	9468	2276	2046	"	1075	"	"	"	switched to TPX 2 because of parity
	9468	2312	2057	2.0 → 1.0	change delay	"	"	"	→ missed one shot -
	9469	2369	2114		610				
	"	2427	2132	1000/0000					decrease Time back delay to 0000
	9470	2461	2143	0000	450				
	9471	2553	2211	0000	400				
	9472	2646	2240	0000	380				
	9473	2738	2308	0000	310				
	9474	2831	2337	000	300				Missed one shot <sup>right ID. not advanced</sup> right away.

Line: 34

Lazon margin

BPI: 800

27

[illegible]

R/V ~~ROBERT D. CONRAD~~ **VEMA**  
 Cruise: **V3613**  
 Line: **84 35**

RECORDING LOG <sup>streamer depths</sup>  
 MCS (near) 0547 0839  
 42' 38'  
 42' 40'  
 (far) - -

W. LUZON MARGIN

DFS IV  
 Format: **SEGB**  
 BPI: **800**

(28)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth fm	PopS Rate <del>ms</del>	Samp. Rate ms	Rec. L. ms	Comments
4/13/82	<del>9483</del>	<del>001</del>				18.0	4	12K	BEGIN LINE #35
			0404						a/c 010
			0515						a/c 255
	9483	001	0541	0	200	"	"	"	
	9484	99	0609	0	350	"	"	"	
		151	0627	1000					change delay to 1000 mpx
	9485	186	0638	1000	680	"	"	"	
	9486	278	0706	1000	710	"	"	"	
		310	0716						SB #181 @ 0716
	9487	372	0735	1000	660	"	"	"	
	9488	465	0804	1000	840	"	"	"	Missed several slots - TPX-1 record.
	9489	558	0833	1000	980	"	"	"	
	9490	651	0902	"	750	"	"	"	
		667	0906						ship's speed increased, something
	9491	744	0930	"	720	"	"	"	still operating, take note!!
	9492	837	0959		690	"	"	"	
	9493	930	1027	"	750	"	"	"	
	9494	1023	1056	"	680	"	"	"	
	9495	1117	1125	"	730	"	"	"	
		1164	1139						increase speed to 185 rpm.

R/V ROBERT D. CONRAD *Verna*  
Cruise: V3613  
Line: 35

# RECORDING LOG

MCS  
Luzon Margin

DFS IV  
Format: SE6 D  
BPI: 800

Date	Tape #	Shot Point #	Time (GMT)	Trip Delay (sec)	Depth (fm)	Pop Rate (Hz)	Samp. Rate (Hz)	Rec. L. (sec)	Comments
7/13/80	9496	1209	1154	1K	730	18K	4	12K	No comment
	9497	1303	1223	"	860	"	"	"	
		1353	1238	2K					change delay to 2 sec.
	9498	1395	1251	"	1010	"	"	"	
		1423	1300	"		"	"	"	reduce speed to 1.5 rpm.
	9499	1488	1320	"	1220	"	"	"	
		1540	1335						Buoy # 182A first shot
	9500	1581	1348	"	1180	"	"	"	Buoy # 182 in at 1344 <sup>14</sup> 2376.4m.
	9501	1674	1417	"	1050	"	"	"	
	9502	1766	1446	"	1030	"	"	"	
	9503	1859	1514	"	880	"	"	"	
		1860	1514	1K					change delay to 1 sec
	9504	1943	1543	"	875	"	"	"	
		<del>1946</del>	1546	"	<del>875</del>	"	"	"	A/C → 255°
	9505	2046	1612	"	875	"	"	"	
	9506	2138	1640	"	1200	"	"	"	
	9507	2231	1709	"	1320	"	"	"	
		2334		2K		"	"	"	change delay to 2 sec.
	9508	2328.5	1738	"	1235	"	"	"	Birds near 36-42- f
	9509	2417	1806	2.443.0	1575	"	"	"	change delay → 3.0 sec. @ # 2453

9510 → 18.2 1830

Line: 35

M C S

LUZON MARGIN

BPI: *for*

30

[illegible]

Line: 36

W Luzon margin

BPI: 800

31

[illegible]



Vema  
R/V ROBERT D. CONRAD  
Cruise: V36-13  
Line: 37

# RECORDING LOG MCS

bird depth

Line 37 (cont) 0455 0538 DFS IV  
(cont) 34' 34' Format: SEG-B  
(cont) 40' 42' BPI: 800

(32)

these times  
Gait times  
are wrong -  
forgot to  
reset clock after panel failure  
W Luzon margin

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth FM	Pop Rate sec	Samp. Rate ms	Rec. L. ms	Comments
7/14/80	9524	0001	0024	3000	1800	18.0	4	1200	
	9525	095	0053	OK	1600				Gait time was wrong
	"	0011	0226	3000					Gait was wrong - reset correctly
	"	0149	0237	3000/4000					increase TB delay to 4000 ms
	9526	188	0249	4000	2250	"	"	"	
	9527	281 374	0318	4000	2250	"	"	"	
	9528	380	0349	4000	2250	"	"	"	lost 5 shots - TPX1 returned
	9529	474	0417	4000	2280	"	"	"	
	9530	568	0447	4000	2200	"	"	"	
	9531	663	0516	4000	2100	"	"	"	
		6731	0537	3000					change delay to 3000 msec
	9532	757 350	0545	3000	1700	"	"	"	
	9533	855	0618	3000	1460	"	"	"	lost 13 shots - TPX2
		863	0644						RPM reduced by 5
	9534	957	0647	3000	1460	"	"	"	
		1013	0704						SB #183 @ 0704
	9535	1051	0716	3000	1460	"	"	"	
	9536	1146	0745	3000	1460	"	"	"	
	"	1200	0801						increased gain by 20db on Aux 4 [was 0db]
	9537	1239	0814	3000	1480	"	"	"	

VEMA

R/V ROBERT D. CONRAD

Cruise: V3613

Line: 37

## RECORDING LOG

MCS

W. LUZON MARGIN

DFS IV

Format: SEGB

BPI: 800

(33)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth FM	Pop Rate sec	Samp. Rate ms	Rec. L msec	Comments
7/14/80	9538	1333	0843	3000	1460	18.0	4	12K	
	9539	1426	0911	"	1470	"	"	"	
	9540	1520	0940	"	1480	"	"	"	
	9541	1614	1010	"	1475	"	"	"	
	9542	1709	1039	"	1340	"	"	"	
		1732	1046	2 K					change delay to 2 sec.
	9543	1801	1107	"	1150	"	"	"	many print errors, tape abraded
	9544	1839	1114	"	1060	"	"	"	
	9545	1931	1147	"	1340	"	"	"	
		1987	1205						change delay to 3.0 sec.
									ship speed → S/A
	9546	2027	1217	"	1120	"	"	"	missed 8 shots
		2038	1220						<del>missed 8 shots</del>
	9547	2060	1237	"	1080	"	"	"	missed 21 shots (2032-2053)
		2130	1244	1K					due to traffic problems
									cannon charge, etc., etc.
	9548	2153	1256	"	850 <del>900</del>	"	"	"	
	9549	2245	1324	"	795	"	"	"	
	9550	2338	1353	"	730	"	"	"	
	9551	2430	1421	"	1050	"	"	"	

Line: 37

Lozen Margin

Page 34

BPI: 800

[illegible]

~~R/V ROBERT D. CONRAD~~  
Cruise: ~~V3613~~  
Line: 38

## RECORDING LOG

M C S

LUZON MARLIN

DFS IV *P.35*  
Format: *SEG B*  
BPI: *800*

[illegible]

R/V ROBERT D. CONRAD

Cruise: V3613

Line: 39

# RECORDING LOG

MCS

LUZON MARGIN

DFS IV

Format: 564 B

BPI: 800

7.36

sec

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay msec	Depth fms	Pop Rate msec	Samp. Rate msec	Rec. L. msec	Comments
7/14/80	9562	0001	1950	0.0	720	18.0	4	12K	
	9563	0095	2019	0.0	740	"	"	"	missed 2 shots
	9564	0187	2047	"	650	"	"	"	2-3 purity light TX1
	9565	0278	2115	0000	210				
	9566	370	2144	0000	210				
	9567	462	2212	0000	320				Depth &ducer readings
	9568	554	2240	0000	440				near — 38 ft & 2 ft far —
	9569	646	2309	0000	520				(two Depth transducers not working)
	9570	738	2337	0000	600				
7/15/80	<del>9571</del>	826	0004	0000/1000					increase Time break delay to 1000 ms
GMT	9571	830	0006	1000	720				Not at 0021, the Julian Day was
	9572	923	0034	1000	900				corrected. It was 1 day behind.
	9573	1015	0103	1000	1140				
	"	1031	0108	1000/2000					increase Time break delay to 2000 ms.
	9574	1107	0131	2000	1370				
	9575	1198	0159	2000	1440				SR #185 @ 0226.
	9576	1291	0228	2000	1510				
	"	1336	0242	2000/3000					increase Time break delay to 3000 ms.
	9577	1385	0258	3000	1460	"	"	"	
	9578	1477	0325	3000	1400	"	"	"	

not at 0021

V2ma  
R/V ROBERT D. CONRAD

Cruise: V36-13

Line: 39

## RECORDING LOG

MCS

Luzon Margin (near)  
(far)

bird depth

0600Z

0700Z

DFS IV

Format: SE 6-B

BPI: 800

37

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth FM	Pop Rate sec	Samp. Rate ms	Rec. L. ms	Comments
7/15/80	9579	1570 <sup>600</sup>	0354	3000	1400	18	4	12K	
	9580	<del>1677</del> 1688	<del>0427</del> 0431	3000	1440	"	"	"	TPX2 revolved twice, lost 17 data TPX1 had attack
			0447						A/C 272 (from 266)
	9581	1782	0500	3000	1540	"	"	"	
			0452						SB #186 @ 0452
	9582	1876	0529	3000	1590	"	"	"	
	9583	1970	0558	3000	1550	"	"	"	
	9584	2063	0626	3000	1520	"	"	"	
	9585	2157	0655	3000	1600	"	"	"	
	9586	2251	0724	3000	1550	"	"	"	
	9587	2345	0753	3000	1780	"	"	"	
	9588	2439	0822	3000	1880	"	"	"	
		2458	0828	4000					change delay to 4000 msec
	9589	2533	0852	4000	2060	"	"	"	
		2596	0911	5K		"	"	"	change delay to 5 sec
	9590	2627	0921	"	2190	"	"	"	
	<del>9541</del>	<del>2721</del>	0939						SB #187 in the water
	9591	2721	0950	"	2270	"	"	"	
	9592	2814	1018	"	2230	"	"	"	

## RECORDING LOG

AT D. CONRAD *Uma*

∴ V3617

39

M C S

Lesen Maryin

DFS IV

Format: SEGO

BPI: *See*

38

[illegible]

Line: 40

## M C S

Lower Margin

Page 39

DFS IV

Format: SEE-3

BPI: 800

[illegible]



R/V ROBERT D. CONRAD *Verna*  
 Cruise: *V3613*  
 Line: *41*

# RECORDING LOG

MCS  
*Lucan Margen*

*151L*

Page 40

DFS IV  
 Format: SEG-13  
 BPI: 800

Date GMT	Tape #	Shot Point #	Time (GMT)	Trip Delay m:sec	Depth (fm)	Pop Rate /m:sec	Samp. Rate /m:sec	Rec. L. /m:sec	Comments
<i>7/15/82</i>	<i>9601</i>	<i>1</i>	<i>1515</i>	<i>5K</i>	<i>2200</i>	<i>15K</i>	<i>4</i>	<i>12K</i>	<i>Start Line 41, course 040°</i>
	<i>9602</i>	<i>97</i>	<i>1545</i>	<i>"</i>	<i>2220</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>missed 2 shots</i>
	<i>9603</i>	<i>190</i>	<i>1613</i>	<i>"</i>	<i>2225</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9604</i>	<i>283</i>	<i>1642</i>	<i>"</i>	<i>2240</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>Birds - , 34, 40, -</i>
	<i>9605</i>	<i>377</i>	<i>1711</i>	<i>"</i>	<i>2240</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9606</i>	<i>471</i>	<i>1740</i>	<i>"</i>	<i>2260</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9606</i>	<i>477</i>	<i>1742</i>						<i>tape exploded - missed 4 shots</i>
	<i>9607</i>	<i>481</i>	<i>1743</i>	<i>"</i>	<i>2260</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>1807 A/C → 082</i>
	<i>9608</i>	<i>580</i>	<i>1814</i>	<i>"</i>	<i>2260</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>tape returned missed 10 shots</i>
	<i>9609</i>	<i>674</i>	<i>1843</i>	<i>5K → 4K</i>	<i>2250</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>DELAY → 4.0 @ #0707 PARTY</i>
	<i>9610</i>	<i>769</i>	<i>1912</i>	<i>4K → 3K</i>	<i>2000</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>DELAY → 3.0 @ #0851</i>
	<i>9611</i>	<i>863</i>	<i>1941</i>	<i>3K → 2K</i>	<i>1650</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>DELAY → 2.0 @ #0930 PARTY</i>
	<i>9612</i>	<i>957</i>	<i>2010</i>	<i>2K</i>	<i>1380</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>BIRDS <sup>NEAR</sup> - , 34, 42, <sup>FAIR</sup> -</i>
	<i>9613</i>	<i>1049</i>	<i>2038</i>	<i>2K → 3K</i>	<i>1400</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>DELAY → 3.0 sec @ #1104</i>
	<i>9614</i>	<i>1142</i>	<i>2107</i>	<i>3000</i>	<i>1550</i>				
	<i>9615</i>	<i>1234</i>	<i>2136</i>	<i>3000</i>	<i>1370</i>				
	<i>"</i>	<i>1263</i>	<i>2144</i>	<i>3000/2000</i>					<i>decrease T.B. delay to 2000 m.s.</i>
	<i>9616</i>	<i>1327</i>	<i>2204</i>	<i>2000</i>	<i>1160</i>				
	<i>9617</i>	<i>1418</i>	<i>2232</i>	<i>2000</i>	<i>1150</i>				
	<i>9618</i>	<i>1510</i>	<i>2301</i>	<i>2000</i>	<i>1250</i>				

R/V ROBERT D. CONRAD *Venn*  
 Cruise: *V36-13*  
 Line: *41*

# RECORDING LOG

MCS

*W Luzon Margin*

*bird depth*  
 (near) *0407*  
 (far) *34'*  
*42'*

DFS IV

Format: *SEG-B*

BPI: *800*

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth FM	Pop Rate sec	Samp. Rate ms	Rec. Ls ms	Comments
<i>7/15/80</i>	<i>9618</i>	<i>1518</i>	<i>2303</i>	<i>2000</i>	<i>1240</i>	<i>18.0</i>	<i>4</i>	<i>12000</i>	<i>Transport didn't go forward -</i>
	<i>"</i>	<i>1554</i>	<i>2315</i>	<i>A/C</i>	<i>090°</i>	<i> </i>	<i> </i>	<i> </i>	<i>missed 8 shots at charge.</i>
	<i>9619</i>	<i>1611</i>	<i>2332</i>	<i>2000</i>	<i>1510</i>	<i> </i>	<i> </i>	<i> </i>	
	<i>"</i>	<i>1683</i>	<i>2354</i>	<i>2000</i>		<i> </i>	<i> </i>	<i> </i>	<i>increase TB delay to 3000 ms</i>
<i>7/16/80</i>	<i>9620</i>	<i>1703</i>	<i>0000</i>	<i>3000</i>	<i>1600</i>	<i> </i>	<i> </i>	<i> </i>	
	<i>9621</i>	<i>1797</i>	<i>0029</i>	<i>3000</i>	<i>1600</i>	<i> </i>	<i> </i>	<i> </i>	
	<i>"</i>	<i>1863</i>	<i>0050</i>	<i>1513 #</i>	<i>188 (start)</i>	<i> </i>	<i> </i>	<i> </i>	<i>A/C 085° (Fishing net)</i>
	<i>9622</i>	<i>1890</i>	<i>0058</i>	<i>3000</i>	<i>1600</i>	<i> </i>	<i> </i>	<i> </i>	<i>tape IN not advanced (this tape)</i>
	<i>9623</i>	<i>1984</i>	<i>0127</i>	<i>3000</i>	<i>1610</i>	<i> </i>	<i> </i>	<i> </i>	
	<i>9624</i>	<i>2077</i>	<i>0156</i>	<i>3000</i>	<i>1620</i>	<i> </i>	<i> </i>	<i> </i>	<i>0223 : slowed clock down 5 seconds,</i>
	<i>9625</i>	<i>2171</i>	<i>0225</i>	<i>3000</i>	<i>1625</i>	<i> </i>	<i> </i>	<i> </i>	<i>it is now within 1 sec. of GMT.</i>
	<i>9626</i>	<i>2264</i>	<i>0253</i>	<i>3000</i>	<i>1630</i>	<i> </i>	<i> </i>	<i> </i>	
	<i>9627</i>	<i>2358</i>	<i>0323</i>	<i>3000</i>	<i>1380</i>	<i> </i>	<i> </i>	<i> </i>	
		<i>2382</i>	<i>0329</i>	<i>2000</i>		<i> </i>	<i> </i>	<i> </i>	<i>change delay to 2000 msec.</i>
	<i>9628</i>	<i>2450</i>	<i>0351</i>	<i>2000</i>	<i>1150</i>	<i> </i>	<i> </i>	<i> </i>	
		<i>2510</i>	<i>0411</i>			<i> </i>	<i> </i>	<i> </i>	<i>POWER FAILURE</i>
	<i>9629</i>	<i>2511</i>	<i>0419</i>	<i>2000</i>		<i> </i>	<i> </i>	<i> </i>	<i>POWER RESUMES</i>
		<i>2513</i>				<i> </i>	<i> </i>	<i> </i>	<i>END LINE 41</i>
	<i>9629</i>	<i>0001</i>	<i>0421</i>	<i>1000</i>	<i>800</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>change delay to 1000 msec</i>

RECORDING LOG		bird depth	
MCS	(near)	2554	065
W LUZON MARGIN		38'	38'
	(far)	46'	42'

DFS IV  
Format: *SEGB*  
BPI: *900*

②

[illegible]

VEMA  
 R/V ROBERT D. CONRAD  
 Cruise: V3613  
 Line: 43

R E C O R D I N G      L O G  
M C S

W. LYBON MARGIN

DFS IV

Format: SEGB

BPI: 800

43

[illegible]

R/V ROBERT D. CONRAD ~~Uema~~

Cruise: V 3613

Line: 44

## RECORDING LOG

MCS

Loren Marvin

DFS IV

Format: SE63

BPI: 500

(44)

Date	Tape #	Shot Point #	Time (-MT)	Trip Delay	Depth fm.	Pop Rate	Samp. Rate	Rec. L.	Comments
7/16/80	9639	1	0940	0	380	18	4	12	Start Line 44, course = 280°
	9640	93	1008	1.0	730	"	"	"	change delay to 1 sec.
		140	1022			23			slow ship + pop rate for traffic.
	9641	184	1040	"	870	"	"	"	
		193	1043			18			speed incr. and pop rate increase
		245	1059	2.0					change delay to 2 sec.
	9642	278	1110	"	1100	"	"	"	
	9643	370	1138	3.0	1385	"	"	"	change delay to 3 sec.
	9644	464	1207	"	1560	"	"	"	
	9645	557	1236	"	1590	"	"	"	
	9646	650	1304	"	1590	"	"	"	
	9647	743	1333	"	1590	"	"	"	
	9648	837	1402	"	1590	"	"	"	
	9649	930	1431	"	1560	"	"	"	
	9650	1025	1500	"	1530	"	"	"	OVERRIDE PARITY
	9651	1119	1529	"	1560	"	"	"	OVERRIDE PARITY
	9652	1214	1558	"	1510	"	"	"	
	9653	1307	1627	"	1540	"	"	"	
	9654	1401	1656	"	1630	"	"	"	OVERRIDE
	9655	1495	1725	"	1640	"	"	"	505

VEMR  
 R/V ROBERT D. CONRAD  
 Cruise: V3613  
 Line: 44

RECORDING LOG  
 MCS

LUZON MARGIN

15

DFS IV 45  
 Format: SEEB  
 BPI: 800

Date	Tape #	Shot Point #	Time GMT	Trip Delay msec	Depth fms	Pop Rate sec	Samp. Rate msec	Rec. L.	Comments
7/14/80	9656	1590	1754	3K	1530	18	4K	12	
	9657	<del>1682</del> 1682	1823	"	1540	"	"	"	
	9658	1774	1851	"	1640	"	"	"	
	9659	1868	1920	"	1560	"	"	"	
	9660	19601	1949	"	1690	"	"	"	
	9661	2054	2018	"	2250	"	"	"	
	"	2068	2022	4K	2250	"	"	"	increase delay to 4 seconds
	"	2130	2041	5K	2260	"	"	"	Birds - 26, 36, - / 4 delay to 5 sec
	9662	2147	2046	"	2260	"	"	"	
	9663	2240	2115	5000	2240				
	9664	2334	2144	"	2230				SP#180
	"	—	2152	"	<del>2250</del>				SP#189
	9665	2426	2213	"	2225				
	9666	2519	2241	1	2220				
	9667	2611	2310		2210				
	9668	2705	2339		<del>1980</del> 2190				
7/17/80	9669	2798	0007		1950 2150				
	9670	2892	0036		1970 2170				
	9671	2984	0015		1960 2160				
	"	3031	0120		1950				End Line 44

Line: 45

## M C S

bird depth,

02562

0430

(near

32'

32'

(far)

36

38'

DFS IV

Format: *SEG-B*

BPI: 800

(46)

[illegible]

*VEMA*  
R/V ~~ROBERT D. CONRAD~~

Cruise: V3613

Line: 46

RECORDING LOG bird depth  
MCS 0535Z 0625 0835

LUZON MARGIN (near)  
(far)

<u>Bird depth</u>	<u>0535Z</u>	<u>0625Z</u>	<u>0835Z</u>
	40'	38'	36'
	46'	44'	42'

DFS IV

Format: *SEG B*

BPI: 800

47

[illegible]



R/V ROBERT D. CONRAD Verna  
Cruise: 3613  
Line: 47

RECORDING LOG  
MCS  
LUZON MARGIN

DFS IV  
Format: S6GB  
BPI: 800

48

Date	Tape #	Shot Point #	Time GMT	Trip Delay	Depth fm	Pop Rate msec	Samp. Rate msec	Rec. L. msec	Comments
7/17/80	9693	2	1226	4.0	2050	18k	4k	12k	Start line 47, Course 040°
		47	1240						170 rpm.
		82	1251	5.0					A/C to 050°, 5sec delay
	9694	96	1255	"	2280	"	"	"	
	9	131	1306	4.0					change delay to 4.0 sec
	9695	190	1324	"	1900	"	"	"	
		255	1344	3.0					change delay to 3.0 sec
	9696	284	1353	"	1700				
		307	1400						A/C → 040°
	9697	377	1422	"	1840	"	"	"	
	9698	471	1451	"	1520	"	"	"	S.B. # 191 over the side
	9699	565	1520	"	1530	"	"	"	missed 1 shot
	9700	659	1549	"	1540	"	"	"	
	9701	752	1618	"	1640	"	"	"	birds —, 44, 46, —
	9702	845	1647	"	1570	"	"	"	
	9703	939	1718	"	1650	"	"	"	
	9704	1033	1744	"	1635 1475	"	"	"	
	9705	1126	1813	"	1620 1420	"	"	"	OVERDRIVE
	9706	1220	1842	"	1605	"	"	"	OVERDRIVE
	9707	1313	1911	"	1590	"	"	"	

1408

1440

Vema  
R/V ROBERT D. CONRAD  
Cruise: V3613  
Line: 47

# RECORDING LOG

MCS  
(near)  
44  
(far)  
44

DFS IV  
Format: SIER  
BPI: 820

(49)

Date GMT	Tape #	Shot #	Time Gmt	Trip Delay ms	Depth fms	Pop Rate % ms	Samp. Rate % ms	Rec. L.	Comments
7/18/80	9708	1408	1940	3000	1660	18K	4K	12K	
	9709	1502	2009	"	1700	"	"	"	2030 A/C 7025
	9710	1597	2039	"	1660	"	"	"	2041 Bud Astern OVERSAMPLING
	9711	1690	2107	"	1560	"	"	"	
	9712	1784	2136	3000	1610	"	"	"	
	9713	1877	2203	3000	1560	"	"	"	
	9714	1970	2234	3000	1610	"	"	"	
	9715	2062	2302	2000	1720	"	"	"	
	9716	2155	2331	3000	1690	"	"	"	
7/18/80	9717	2248	0000	3000	1810	"	"	"	transducer diff: lead 1, 44, 44, 1
	9718	2342	0029	3000	1870	"	"	"	
	9719	2435	0057	3000	1790	"	"	"	
	9720	2529	0126	3000	1800	"	"	"	missed 1 shot
	"	"	0124	"	"	"	"	"	5B192 @ 0129 on Aux 3
	9721	2622	0155	3000	1800	"	"	"	
	9722	2716	0224	3000	1710	"	"	"	
	9723	2809	0253	3000	1900	"	"	"	
		2869	0311	2000	1900	"	"	"	change delay to 200 msec
	9724	2902	0322	2000	1960	"	"	"	
	9725	2994	0350	2000	1920	"	"	"	

R/V ~~ROBERT D. CONRAD~~  
Cruise: V36-13  
Line: 47

## RECORDING LOG

M C S

LUZON MARGIN

bird depth  
0926  
(near) 46'  
(far) 46'

DFS IV

Format: *SEQ B*

BPI: 800

50

[illegible]

VEMA  
BERT D. CONRAD

se: V3613

ne: 48

RECORDING LOG  
MCS

LUZEN MARGIN

bird depth  
0505Z 0606Z  
(near) 46' 44'  
(far) 48' 46'

DFS IV

Format: SEGB

BPI: 800

51

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay msec	Depth FM	Pop Rate sec	Samp. Rate msec	Rec. L. msec	Comments
7/18/80	9727	1	0452	4000	1840F	18.0	4	12K	START LINE 48
	9728	96	0522	4000	2160	"	"	"	
	9729	189	0551	4000	2210	"	"	"	
	9730	282	0619	4000	2100	"	"	"	
	9731	376	0648	4000	2190	"	"	"	
	9732	469	0717	4000	2190	"	"	"	
	9733	563	0746	4000	2190	"	"	"	
	9734	656	0815	4000	2110	"	"	"	
	9735	780	0844	4000	2050	"	"	"	
	9736	843	0912	"	1970	"	"	"	
	9737	937	0941	"	1960	"	"	"	
	9738	1030	1010	"	1930	"	"	"	
	9739	1124	1039	"	1880	"	"	"	
			1080						speed alternation for traffic return to speed
			1057						
	9740	1217	1108	"	1860	"	"	"	
	9741	1311	1137	"	1840	"	"	"	
	9742	1404	1206	"	1830	"	"	"	
	9743	1497	1235	"	1820	"	"	"	
		1504	1239						End Line 48

R/V ROBERT D. CONRAD *Vema*Cruise: *V3613*Line: *49*

## RECORDING LOG

M C S

*Cuzon margin*

DFS IV

Format: *SE613*BPI: *800*52

Date	Tape #	Shot Point #	Time GMT	Trip Delay	Depth fms	Pop Rate	Samp. Rate	Rec. L.	Comments
<del>7/18/80</del>	9744	1	1342	4	1800	18.0	4	12	Start Line 49
	9745	95	1411	"	1810	"	"	"	
	9746	188	1440	"	1825	"	"	"	
	9747	282	1509	"	1840	"	"	"	
	9748	375	1538	"	1840	"	"	"	
	9749	470	1607	"	1890	"	"	"	<del>FISH</del> A/C 1100 A/S 190 rpm @ 1624
	9750	563	1636	"	2005	"	"	"	FISH NEAR 44. 48 - FAR
	9751	658	1705	"	2080	"	"	"	#1435. Buoy 1703
	9752	750	1734	"	2140	"	"	"	OVERDRIVE
	9753	845	1803	"	2160	"	"	"	
	9754	938	1832	"	2150	"	"	"	
	9755	1032	1901	"	2035	"	"	"	
	9756	1125	1929	"	1980	"	"	"	
	9757	1218	1958	"	1825	"	"	"	
		<del>1306</del> 1306	2025	→ 3		"	"	"	change delay to 3.0 seconds
	9758	1311	2027	3	1595	"	"	"	
	9759	1405	2056	3000	1670				
	9760	1497	2124	3000	1510				
	9761	1591	2153	3000	1660				
	9762	1684	2222	3000	1750				

R/V ROBERT D. CONRAD *Verna*  
Cruise: *V36-13*  
Line: *A9*

RECORDING LOG  
MCS

*Luzon margin*

DFS IV

Format: *SEGB*

BPI: *800*

*53*

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth FM	Pop Rate sec.	Samp. Rate ms	Rec. L. ms	Comments
7/18/80	9762 <i>ctd</i>	1770	2249	<del>3000</del> 2000		18.0	4	12000	change TB delay to 2000 ms
	9763	1778	2251	2000	1230				
	9764	1870	<del>2318</del> 2318			<del>18.0</del> 28.0			S/A - tag ahead - reduce pop rate to 250 sec.
	"								reduce TB delay to 1000 ms
	<del>9764</del>	1876	2322	<del>3000</del> 1000	1000	28.0			
	<del>9764</del>		<del>0000</del>						
7/19/80	9765	1961	0003	1000	1060	28.0			
	"	1970							A/spd
	"	1972	0004			<del>28.0</del> 18.0			A/c 105° 165 RPM change pop rate to 18.0 from 28.0
	9766	2052	0032	1000	990	18.0			
	9767	2144	0101	1000	1010				
	"	2168	0108	<del>1000</del> 2000					increase Time break delay to 2000 ms
	9768	2236	0129	2000	1080				
	9769	2328	0157	2000	1150				
	9770	2419	0225	2000	1110				
	9771	2511	0254	2000	1440				
			0300						A/C 115
	9772	2602	0322	2000	1680	"	"	"	
		2647	0335	4000					change delay to 4000 ms
			0337						decrease RPM to 175

VEMA  
R/V ROBERT D. CONRAD

Cruise: V36-13

Line: 49

RECORDING LOG  
MCS

LUZON MARGIN  
(N. LUZON RIDGE)

bird depth  
(near) 0340 0602 0854 DFS IV  
(far) 42' 42' 38' Format: SEGB  
42' 42' 42' BPI: 800

(34)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay msec	Depth FM	Pop Rate sec	Samp. Rate msec	Rec. L. msec	Comments
7/19/80	9773	2695	0351	4000	1920	18.0	4	12 K	
			0348						SP # 194 @ 0348
	9774	2708	0420	4000	1940	"	"	"	AUX 1 GAIN CHANGED TO +10 dB
	9775	2882	0448	4000	1940	"	"	"	(FROM -10)
	9776	2976	0518	4000	1930	"	"	"	
	9777	3070	0547	4000	1900	"	"	"	
	9778	3163	0615	4000	1860	"	"	"	
		3210	0630						A/c 125 A/S 195 RPM's
	9779	3257	0644	4000	1840	"	"	"	
	9780	3350	0713	4000	1800	"	"	"	
		3414	0723						A/S 210 RPM's
	9781	3444	0741	4000	1600	"	"	"	
		3441	0741	3000					change delay to 3000 msec
	9782	3537	0811	3000	1450				
	"	3562	0819			18.0 20.0	"	"	change pop rate to 20.0 sec
		3588	0827	2000					change delay to 2000 msec
			0835						A/c 100
	9783	3630	0842	2000	1240	"	"	"	
		3677	0858	1000					change 1000 msec delay
	9784	3722	0914	"	750	"	"	"	

R/V ROBERT D. CONRAD *Vema*  
 Cruise: V 3613  
 Line: 49

# RECORDING LOG

MC S  
 Luzon Margin

DFS IV  
 Format: SEGB  
 BPI: 800

Date	Tape #	Shot Point #	Time	Trip Delay	Depth	Pop Rate	Samp. Rate	Rec. L.	Comments
7/17/80	<del>9785</del>			1		20	4	12	
		3791	0437			18			change up rate to 18 sec.
	9785	3814	0444	"	770	"	"	"	slow ship and A/C to 110°
	9786	3844	0453	"	740	"	"	"	type problems
	9787	3937	1022	"	770	"	"	"	
		3966	1031						A/C to 130°
	<del>9788</del> <del>9789</del>	4029	1051	"	640	"	"	"	
	9789	4121	1119	0	420	"	"	"	change delay to 0 sec
	9790	4213	1147	"	370	"	"	"	
		4265	1203						A/C to 105°
	9791	4306	1216	1.0	580	"	"	"	change delay to 1.0 sec.
		4346	1228						come to halt speed for traffic
		4372	1236						A/C to 080° for traffic
		4381	1239	2.0					change delay to 2 sec
	9792	4398	1244	"	1100	"	"	"	
		4404	1248						resume course + speed
	9793	4440	1313	"	1270	"	"	"	
		4544	1324	3.0					change delay to 3.0 sec
	9794	4582	1341	"	1400	"	"	"	
	9795	4676	1410	"	1430	"	"	"	



R/V ROBERT D. CONRAD Vema

Cruise: V 3613

Line: 49

## RECORDING LOG

MCS  
Lucan Margin

DFS IV

Format: SEG-B

BPI: 800

56

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay sec	Depth Fm	Pop Rate sec	Samp. Rate ms	Rec. L. ms	Comments
7/14/80	9796	4769	1439	2.000	1280	18.0	4	1200	change delay to 2.0 sec
		4836	1500						A/C to 090°
	9797	4862	1507	"	1100	"	"	"	
	9798	4954	1536	"	1345	"	"	"	
	9799	5046	1604	"	1505	"	"	"	
		5056	1607	3.0	1505	"	"	"	increase delay to 3.0 sec
	9800	5139	1633	"	1605	"	"	"	- file count ahead by 1 - 3, adjusted it
		5225	1700						A/C to 085°
	9801	5233	1702	"	1670	"	"	"	
		<del>5233</del>	1704		1665				S.B. 195 in the water
		5278	1716	4.0	1690				increase delay to 4.0 sec.
	9802	5326	1731	"	1695	"	"	"	
	9803	5420	1800	"	1720	"	"	"	
	9804	5514	1829	"	1730	"	"	"	
	9805	5609	1858	"	1750	"	"	"	OVERRIDE
	9806	5703	1927	4.43.0	1880	"	"	"	delay → 3.0 AT #5713 OVERRIDE
	9807	5798	1956	3.0	1780	"	"	"	OVERRIDE/PARITY
	9808	5892	2025	"	1590	"	"	"	A/C → 090 A/S → 200 Rpm
	9809	5986	2055	"	1530	"	"	"	
	9810	6074	2123	"	1380	"	"	"	2135: corrected Day # on clock to day # 201; was 200 (incorrect)

R/V ROBERT D. CONRAD *Vena*

Cruise: V36-13

Line: 49

## RECORDING LOG

MCS

*Luzon Margin**eel transducer  
depths:  
head 1 1 tail  
—, 42, 42, —*

DFS IV

Format: SEG-B

BPI: 8007

(57)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth m	Pop Rate sec	Samp. Rate ms	Rec. L/s	Comments
7/19/80	9811	6172	2152	3000	2000	18.0	4	12000	
	"	6194	2159	<del>3000</del> 4000					increase TB delay to 4000 ms
	9812	6265	2221	4000	2050				
	9813	6359	2250	4000	2400				
	"	6383	2257	<del>4000</del> 5000					increase TB delay to 5000 ms
	9814	6452	2318	5000	2700				at 2313 A/C → 100°
	"	6512	2337	<del>5000</del> 6000					increase TB delay to 6000 ms
	9815	6546	2347	6000	2860				
7/20/80	"	6608	0006	"					SB#196 @ 0006
	9816	6639	0016	"	2850				
	9817	6733	0045	6000	2840				
	"	6803	0107			<del>18.0</del> 20.0			slow pop rate to 20.0 sec.
	9818	6826	0115	6000	2840	20.0			20.0 pop rate
	9819	6919	0146	6000	2830	20.0			
	9820	7012	0218	6000	2820	"			
	9821	7106	0255	6000	2860	"	"	"	
		7153	0307						L/S = 7153
									END LINE #49
			0308						A/C OK A/S 150 RPM's

VEMA  
R/V ROBERT D. CONRAD  
Cruise: V3613  
Line: 50

# RECORDING LOG

MCS

LUZEN MARGIN

Steamer depth  
near DT 52', 38' Far DT  
Bad Bad

DFS IV

Format: SEAB

BPI: 800

(58)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth FM	Pop Rate sec	Samp. Rate ms	Rec. L. ms	Comments
7/22/80	<del>9821</del>	0002	1904	1.0	430	18.0	4	12000	Begin Line 50
	9822	19	1909	0.0					change delay to 0.0 seconds
	9823	<del>94</del> 94	1932	"	250	"	"	"	
	9824	186	2000	"	330	"	"	"	
	9825	279	2029	"	360	"	"	"	
	9826	371	2058	"	400	"	"	"	
	"	412	2110	0000					A/C 175°
	9827	463	2126		390				
	"	= 538	2148						SB # 197
	9828	555	2154	0000	360				
	9829	656	2226	0000	390				missed 9 shots - bad roll of tape
	9830	747	2254	0000	550				
	9831	839	2332	0000	550				Time should probably be 2323
	"		2330		55				A/C 190°, reduce speed to 170 kph
	9832	930	2350	0000	530				#
7/23/80	9833	1022	0019	0000	620				SB 197 off @ 0030
	"		0032						SB # 198 on @ 0032
	"	1081	0037	0000					increase time break delay to 1000 ms
	"		0042						SB # 198 on at 0042
	9834	1113	0047	1000	650				

Line: 50

R E C O R D I N G      L O G  
M C S

Lezon margin

LOG bind depth  
03342

(near) 60'

(far) 46'

DFS IV

Format: *SEG-B*

BPI: 807)

59

[illegible]

VEMA  
R/V ROBERT D. CONRAD

Cruise: V3613

Line: 57

RECORDING LOG bind depth  
MCS 0547Z 0614Z

LUZON MARGIN

	LOG <u>bird depth</u>		
	<u>0517Z</u>	<u>0614Z</u>	<u>0730Z</u>
(near)	<u>60'</u>	<u>62'</u>	<u>56'</u>
(far)	<u>40'</u>	<u>46'</u>	<u>44'</u>

DFS IV

Format: *SEGB*

BPI: ~~See~~

[illegible]

R/V ROBERT D. CONRAD *Verna*

Cruise: V3613

Line: 52

## RECORDING LOG

MCS

*Coron Margin*

DFS IV

Format: SEGB

BPI: 800

61

Date	Tape #	Shot Point #	Time GMT	Trip Delay (msec)	Depth (fm)	Pop Rate (sec)	Samp. Rate (msec)	Rec. (L. msec)	Comments
7/23/80	9852	1	1028	3K	1580	18	4	12K	Start Line 52
	9853	45	1057	"	1550	"	"	"	
	9854	188	1126	"	1570	"	"	"	
			1137						S.B. # 194 in the water
	9855	282	1155	"	1590	"	"	"	
	9856	375	1223	"	1610	"	"	"	
	9857	469	1252	"	1420	"	"	"	
	9858	562	1321	"	1250	"	"	"	
		600	1333	2K					change delay to 2 sec.
	9859	655	1350	"	1230	"	"	"	
		691	1401						A/C to 230°, slow down slightly
	9860	747	1418	"	1290	"	"	"	
		782	1429	3K					change delay to 3.0 sec.
	9861	840	1447	"	1480	"	"	"	OVERDRIVE
	9862	934	1516	"	1630	"	"	"	
	9863	1078	1545	3K→2K	1460	"	"	"	Change delay to 2.0 sec. 1615 AK→200
	9864	1120	1613	2K	1470	"	"	"	OVERDRIVE
	9865	1213	1642	"	1420	"	"	"	OVERDRIVE
	9866	1306	1711	2K	1440	"	"	"	
	9867	1399	1739	2K	1460	"	"	"	CHANGE DELAY → 3 sec

UEMA  
R/V ROBERT D. CONRAD  
Cruise: V3613  
Line: 52

RECORDING LOG  
MCS

LUZON MARGIN

62  
DFS IV  
Format: SEC B  
BPI: 800

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay msec	Depth fms	Pop Rate sec	Samp. Rate msec	Rec. L. msec	Comments
7/23/80	9868	1492	1808	3K	1480	18.0	4	12-K	
	9869	1586	1837	"	1446	"	"	"	
	9870	16479	1906	"	1450	"	"	"	
		17 15	1917						A/C → 205
		~17 40	1924						SB # 200 in the water
	9871	1773	1935	"	1475	"	"	"	
	9872	1866	2004	"	1455	"	"	"	
	9873	1960	2033	"	1465	"	"	"	
	9874	2053	2101	3000	1490				
	9875	2146	2130	3000	1500				
	9876	2239	2159	3000	1490				
	9877	2332	2228	3000	1330				
	"	2367	2238	$\frac{3000}{2000}$					decrease Time break delay to 2000 ms
	9878	2424	2256	2000	1240				2251 $\frac{1}{2}$ : SB # 200 off.
	9879	2516	2324	2000	1200				
	"		2339						SB # 201 on
	"	2588							Increased gain on Aux 1 from -10dB to +10dB
	9880	2608	2353	2000	1100				
7/24/80	"	2630	0000						A/C 195°
	9881	2700	0021	2000	1020				

R/V ROBERT D. CONRAD *Vema*  
 Cruise: V36-13  
 Line: 52

RECORDING LOG *bird depth*  
 MCS  
*Luzon Margin* (near) ~~02517~~ *54'* ~~05112~~ *54'* ~~07327~~ *56'*  
 (far) *36'* *38'* *38'*

DFS IV  
 Format: SEGB  
 BPI: 800

(63)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth Fm	Pop Rate sec	Samp. Rate ms	Rec. Ls ms	Comments
7/24/80	9882	2790	0049	2000	950	18.0	4	12000	
	9883	2882	0117	2000	1020				
	9884	2973	0145	2000	1130				
	9885	3065	0214	2000	1160				
	9886	3156	0242	2000	1040				
	9887	3240	0310	"	920	"	"	"	
		3315	0331	1000					change delay to 1000 msec
	9888	3340	0339	"	925	"	"	"	
	9889	3432	0407	"	960	"	"	"	
	9890	3524	0436	"	840	"	"	"	
	9891	3616	0504	"	840	"	"	"	
			0521						#202 SB - @ 0521
	9892	3700	0533	"	720	"	"	"	
	9893	3800	0601	"	720	"	"	"	
	9894	3892	0629	"	600	"	"	"	
	9895	3989 <sup>3985</sup>	0658	"	560	"	"	"	lost 3 shots (TPX 2)
	9896	4081	0727	"	630	"	"	"	
	9897	4173	0756	"	730	"	"	"	
	9898	4265	0824	"	720	"	"	"	
	9899	4357	0853	"	660	"	"	"	



R/V ROBERT D. CONRAD *Vema*Cruise: *V36-13*Line: *52*

## RECORDING LOG

MCS

*W. Luzon Margin*

DFS IV

Format: *SEGB*BPI: *800*

(64)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth Fm	Pop Rate sec	Samp. Rate ms	Rec. L. ms	Comments
<i>7/24/80</i>	<i>9900</i>	<i>4449</i>	<i>0921</i>	<i>1K</i>	<i>830</i>	<i>18</i>	<i>4</i>	<i>12K</i>	
	<i>9901</i>	<i>4542</i>	<i>0950</i>	<i>"</i>	<i>920</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>A/C 175 @ 0900</i>
		<i>4561</i>	<i>0956</i>	<i>2K</i>					<i>change delay to 2K</i>
	<i>9902</i>	<i>4634</i>	<i>1018</i>	<i>"</i>	<i>1010</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9903</i>	<i>4727</i>	<i>1047</i>	<i>"</i>	<i>990</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9904</i>	<i>4819</i>	<i>1116</i>	<i>"</i>	<i>960</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9905</i>	<i>4911</i>	<i>1144</i>	<i>"</i>	<i>1020</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9906</i>	<i>5003</i>	<i>1212</i>	<i>"</i>	<i>1070</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9907</i>	<i>5096</i>	<i>1241</i>	<i>"</i>	<i>1080</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9908</i>	<i>5188</i>	<i>1309</i>	<i>"</i>	<i>1160</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9909</i>	<i>5281</i>	<i>1338</i>	<i>"</i>	<i>1220</i>	<i>"</i>	<i>"</i>	<i>"</i>	
			<i>1345</i>						<i>S.B. # 203 Aover the side</i>
	<i>9910</i>	<i>5374</i>	<i>1406</i>	<i>"</i>	<i>1220</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>1406 AK → 150° 1410 AK → 175°</i>
			<i>1430</i>						<i>S.B. # 203 over the side</i>
	<i>9911</i>	<i>5467</i>	<i>1436</i>	<i>"</i>	<i>1240</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9912</i>	<i>5560</i>	<i>1504</i>	<i>"</i>	<i>1260</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9913</i>	<i>5652</i>	<i>1532</i>	<i>"</i>	<i>1285</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9914</i>	<i>5744</i>	<i>1601</i>	<i>"</i>	<i>1295</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9915</i>	<i>5837</i>	<i>1630</i>	<i>"</i>	<i>1300</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>9916</i>	<i>5929</i>	<i>1658</i>	<i>"</i>	<i>1275</i>	<i>"</i>	<i>"</i>	<i>"</i>	

Line: 52

M C S

W. LUZON MARGIN

DFS IV

Format: S E M B

BPI: 800

(64)

[illegible]



VEMA  
R/V ROBERT D. CONRAD  
Cruise: V3613  
Line: 54

RECORDING LOG  
MCS 0310 0419 0608Z 0819Z DFS IV  
W. LUZON MARGIN (near) 14' 22' 30' 26' Format: SEG B  
(far) 02' 22' 42' 28' BPI: 800

(66)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay msec	Depth FM	Pop Rate sec	Samp. Rate msec	Rec. L. msec	Comments
7/25/80	9938	012	0330	2000	1360	27.0	4	12K	START LINE #54
	9939	102	0411	"	1340	"	"	"	change shot interval to 27 sec on ch
	9940	196	0454	"	1320	"	"	"	
	9941	288	0536	"	1300	"	"	"	
		342	0601			28.0			change pop rate to 28 sec (smg = 3.5 Hz)
	9942	381	0619	"	1250	"	"	"	
	9943	472	0703	"	1240	"	"	"	
	<del>9944</del>	<del>523</del>	0719						
	9944	530	0730	"	1260	"	"	"	lost 35 shots! (SHITTTT)
	9945	622	0814	"	1160	"	"	"	
	9946	715	0858	"	1000	"	"	"	
		709	0855	1000					change delay to 1000 msec.
		<del>730</del> 732	0906	2K					change delay to 2K
	9947	807	0942	"	1460	"	"	"	
		814	0946		1460	25.0			change pop rate to 2.5 sec
		846	1001	3K					change delay to 3 sec
	9948	901	1022	"	1530	"	"	"	
	9949	995	1102	"	1770	"	"	"	
		1011	1109	4K					change delay to 4K
	9950	1089	1142	"	2200	"	"	"	

Line: 54

## RECORDING LOG

M C S

Lozan Margin

DFS IV

Format: SE-3

BPI: 800

67

[illegible]

R/V ROBERT D. CONRAD

Cruise: V3613

Line: 55

RECORDING LOG  
MCS

W. LUZON MARGIN

DFS IV

Format: SEGB

BPI: 800

(68)

(- Line # Not Incremented for line 55)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth fms	Pop Rate sec	Samp. Rate m sec	Rec. L. sec	Comments
7/25/80	9963	0001	2038	4K	2175	25	4	12	
	"	0018				18.0	1		Begin Line 55/dirds 28/28
	9964	96	2111	4000	2220	18.0	1		change Pop Rate <del>18.0</del> to 18sec - Speed 5.6k wts
	9965	190	2140	4000	2300				
	9966	284	2209	4000	2310				
	9967	378	2238	4000	2430				
	<del>9967</del>	398	2244	<del>4000</del> 5000					
	9968	472	2308	5000	2500				increase T.B. delay to 5000 ms
	9969	566	2336	5000	2590				Tape ID not advanced on 9968
7/26/80	9970	660	0005	5000	2740				
	9971	753	0034	5000	2740				
	9972	847	0103	5000	2300				
	"	905	0121	<del>5000</del> 4000					
	9973	940	0132	4000	1950				change TB delay to 4000 ms.
	9974	1034	0201	4000	1830				
	"	1083	0216	<del>4000</del> 3000					
	9975	1127	0239	3000	1600				change delay to 3000 ms.
	<del>9975</del>		0230						085
	9976	1221	0259	"	1390				A/C 085°
	9977	1314	0327	"	1415				

R/V ROBERT D. CONRAD *Verna*

Cruise: V36-13

Line: 55

RECORDING LOG  
MCS*W. Luzon margin*

DFS IV

Format: SEGB

BPI: 800

(69)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth FM	Pop Rate sec	Samp. Rate ms	Rec. L. ms	Comments
7/26/80	9978	1408	0356	3000	1380	18.0	4	12K	birds: 34'/48'
		1488	0421						SB # 206 @ 0421
	9979	1501	0425	"	1390	"	"	"	
	9980	1595	0454	"	1386	"	"	"	
	9981	1689	0523	"	1380	"	"	"	
			0549						birds: 24'/28' <del>24'</del>
	9982	1783	0552	"	1370	"	"	"	
			0520						A/S 140 Rem's to avoid vessel
			0548						A/S 5.7 kHz / 0535 to 0550
	9983	1876	0621	"	1350	"	"	"	Conrad vanes CBS-120 OBS
	9984	1970	0650	"	1320	"	"	"	
		2002	0700						
		2045	0713	3000					A/C 075
									change delay to 2000 msec
	9985	2064	0719	"	1250	"	"	"	
	9986	2157	0747	"	1150	"	"	"	
	"	2213	0805						A/C 085°
	"	2240	0813	2000 1000					change TB delay from 2000 to 1000
	9987	2249	0816	1000	700	"	"	"	
		2277	0824	6000					change delay to 0 msec
			0841						bird - 38'/38'

Line: 55

W. LYBON MARGIN

BPI: 400

[illegible]



71

DFS IV

Format: **SEGB**

W. LUZON MARGIN

BPI: 800

[illegible]

R/V ROBERT D. CONRAD Vema

Cruise: V 3613

Line: 57

## RECORDING LOG

MCS  
Lozen Margin

DFS IV

Format: SEGB

BPI: 800

72

Date	Tape #	Shot Point #	Time (GMT)	Trip Delay	Depth Fm	Pop Rate	Samp. Rate <small>in sec</small>	Rec. L. <small>sec</small>	Comments
7/26/8	9992	1	1106	0	410	18	4	12	Start Line 57
	9993	93	1135	1	720	"	"	"	change delay to 1 sec.
		150	1152			25			pop rate → 25 sec., + traffic
	9994	185	1207	"	850	"	"	"	
		237	1230	"		18	"	"	pop rate → 18 sec., ship to manual speed
	9995	277	1242	"	1100	"	"	"	
		300	1249	2					change delay to 2 sec.
	9996	369	1310	"	1140	"	"	"	
	9997	462	1339	"	1160	"	"	"	1355Z) S.D.# 307 over
	9998	554	1407	"	1190	"	"	"	
	9999	646	1436	"	1240	"	"	"	
	1	738	1504	"	1260	"	"	"	
	2	831	1533	"	1275	"	"	"	
	3	922	1601	"	1305	"	"	"	
	4	1016	1630	"	1370	"	"	"	missed one shot
		1080	1649	3					change delay to 3 seconds
	5	1120	1659	"	1480	"	"	"	
	6	1214	1728	"	1720	"	"	"	
	7	1294	1756	"	1820	"	"	"	
	8	1389	1835	3.74	2040	"	"	"	change delay → 4.0 sec

1482 1854

R/V ROBERT D. CONRAD

Cruise: V3613

Line: 57

## M C S

LIZON MARGIN

73

Format: 5/26/83

BPI: *FD*

[illegible]

Line: 53

R E C O R D I N G      L O G  
M C S

• 120 end line

W Luzon Margin

DFS IV

Format: *SE 6-13*

BPI: 

74

[illegible]

R/V ROBERT D. CONRAD *Verna*Cruise: *V36-13*Line: *59*RECORDING LOG  
MCS*Line 59*  
*W. Luzon Margin*

DFS IV

Format: *SEG-B*BPI: *800*

(75)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth Fm	Pop Rate sec	Samp. Rate ms	Rec. L. ms	Comments
7/27/80	23	001	0155	4000	2220	18.0	4	12000	Course 090°
	24	94	0224	4000	2290				
	"	0117	0231	<del>4000</del> 5000					increase TB delay to 5000
	25	187	0253	5000	2325	"	"	"	
	26	281	0322	"	2400	"	"	"	
	27	375	0351	"	2400	"	"	"	birds: 46'/38'
	28	468	0420	"	2410	"	"	"	
		523	0436	6000					change delay to 6000 msec
	29	562	0449	"	2730	"	"	"	
	30	655	0518	"	2620	"	"	"	
		677	0524	5000					change delay to 5000 msec
		699	0531						A/S 175 RPM's
	31	749	0547	"	2280	"	"	"	
		768	0552	4000					change delay to 4000 msec
	32	842	0615	"	1710	"	"	"	
		864	0622	3000					change delay to 3000 msec
		908	0635						A/S 130 RPM's
		921	0640			18/21			reduce shot rate to 22 sec
	33	936	0645	"	1480	"	"	"	A/C 150° @ 0645
			0701						A/S 175 RPM's A/C 090

VEMA  
R/V ROBERT D. CONRAD.

Cruise: V36-13

Line: 59

## RECORDING LOG

M C S

W. LUZON MARGIN

DFS IV

Format: SEGB

BPI: 800

76

[illegible]

Line: 60

Loren Mangin

BPI: 800

77

[illegible]

D. CONRAD Vema  
 Cruise: V 3613  
 Line: 61

# RECORDING LOG

MCS  
 Lozen Margin

78  
 DFS IV  
 Format: SE63  
 BPI: 800

Date	Tape #	Shot Point #	Time GMT	Trip Delay sec	Depth fms	Pop Rate	Samp. Rate	Rec. L.	Comments
7/27/80	48	1	1441	0	450	15.0	4	12	Start Line 61, course 265°
		20	1447	1.0					change delay to 1 sec
		80	1506	2.0					change delay to 2 sec
	49	93	1510	"	1130	"	"	"	
		152	1528	3.0					change delay to 3 sec
	50	186	1538	3.0	1330	"	"	"	TAPE PROBLEM, LOST 13 SHOTS AT END RETURN TAPE 50-51
	51	291	?	"	1330	"	"	"	SBT# 209 in WATER AT 160'3
	52	320	1620	"	1330	"	"	"	
	53	413	1648	"	1320	"	"	"	
		496	1714	2.0					CHANGE DELAY → 2.0 SEC
	54	507	1717	2.0	1260	"	"	"	OVERDRIVE
	55	549	1746	"	1090	"	"	"	OVERDRIVE
	56	692	1815	"	1080	"	"	"	
	57	785	1843	"	1200	"	"	"	
	58	877	1912	"	1410	"	"	"	
	59	968	1940	"	1580	"	"	"	
		1006		3.0					change delay → 3.0 seconds
		1009		4.0					" " → 4.0 seconds.
			<del>2009</del> 1600						A/I → 290°
	60	1062	2009	"	2290				



Line: 61

## M C S

LUZON MARGIN

BPI: 800

79

[illegible]

Line: 67

## W. Luzon Margin

BPI: 500

50

[illegible]

M C S  
WILLOW MARLIN

R/V ROBERT-D.-CONRAD

Cruise: V3613

Line: 63

DFS IV

Format: SEG B

BPI: 820

81

[illegible]

R/V ROBERT D. CONRAD *V2ma*Cruise: *V36-13*Line: *64*RECORDING LOG  
MCS*W. LUZON MARGIN*

DFS IV

Format: *SEG-B*BPI: *500**82*

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay ms	Depth Fm	Pop Rate % sec	Samp. Rate ms	Rec. L. ms	Comments
<i>7/28/80</i>	<i>73</i>	<i>1</i>	<i>0432</i>	<i>4000</i>	<i>1980</i>	<i>18.0</i>	<i>4</i>	<i>(2000)</i>	<i>START LINE #64</i>
	<i>74</i>	<i>95</i>	<i>0502</i>	<i>4000</i>	<i>2010</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>birds: 52'/36'</i>
	<i>75</i>	<i>188</i>	<i>0530</i>	<i>"</i>	<i>1960</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>76</i>	<i>282</i>	<i>0559</i>	<i>"</i>	<i>2100</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>77</i>	<i>374</i>	<i>0628</i>	<i>"</i>	<i>2200</i>	<i>"</i>	<i>"</i>	<i>"</i>	
		<i>387</i>	<i>0631</i>	<i>5000</i>					<i>change delay to 5000 msec</i>
		<i>431</i>	<i>0645</i>	<i>6000</i>					<i>change delay to 6000 msec</i>
	<i>78</i>	<i>468</i>	<i>0657</i>	<i>"</i>	<i>2550</i>	<i>"</i>	<i>"</i>	<i>"</i>	
		<i>474</i>	<i>0658</i>	<i>5000</i>					<i>change delay to 5000 msec</i>
		<i>525</i>	<i>0714</i>	<i>4000</i>					<i>change delay to 4000 msec</i>
	<i>79</i>	<i>561</i>	<i>0725</i>	<i>3000</i>	<i>1560</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>change delay to 3000 msec</i>
		<i>602</i>	<i>0738</i>	<i>2000</i>					<i>change delay to 2000 msec</i>
	<i>80</i>	<i>654</i>	<i>0754</i>	<i>"</i>	<i>1050</i>	<i>"</i>	<i>"</i>	<i>"</i>	
		<i>717</i>	<i>0812</i>	<i>1000</i>					<i>change delay to 1000 msec</i>
	<i>81</i>	<i>746</i>	<i>0822</i>	<i>"</i>	<i>780</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>birds: 52'/36'</i>
	<i>82</i>	<i>843</i>	<i>0853</i>	<i>"</i>	<i>680</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>lost 3 shots TRX 2</i>
	<i>83</i>	<i>935</i>	<i>0921</i>	<i>"</i>	<i>860</i>	<i>"</i>	<i>"</i>	<i>"</i>	
	<i>84</i>	<i>1027</i>	<i>0944</i>	<i>"</i>	<i>930</i>	<i>"</i>	<i>"</i>	<i>"</i>	
									<i>S/A @ 0931 F/A @ 0945</i>
	<i>85</i>	<i>1114</i>	<i>1018</i>	<i>"</i>	<i>950</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>0953 SB 210 i the water</i>

Line: 6.4

We Leave Margin

BPI: 502

53

[illegible]

## RECORDING LOG

R/V ~~ROBERT D.~~ CONRAD *Vema*

Cruise: V 3613

Line: 65

M C S

Lower Margin

DFS IV

Format: SEGB

BPT: 800

[illegible]

R/V ROBERT D. CONRAD *Verna.*

Cruise: V 3613

Line: 66

# RECORDING LOG

M C S

Coron Hargen

DFS IV

Format: SEG-B

BPI: 200

85

[illegible]

R/V ROBERT D. CONRAD VEMA

Cruise: V3613

Line: 67

## RECORDING LOG

MCS

LUZON MARGIN

DFS IV

86

Format: SECB

BPI: 800

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay msec	Depth fms	Pop Rate sec	Samp. Rate msec	Rec. L. msec	Comments
7/28/80	98	1	1829	1.0	830	18.0	4	12K	Start Line 67
	99	93	1858	"	865	"	"	"	Birds - 54, 36, -
	100	185	1926	"	920	"	"	"	
	101	278	1955	"	930	"	"	"	
	102	370	2023	"	920	"	"	"	
	103	463	2052	1.0 → 2.0	1200	"	"	"	CHANGE DELAY → 2.0 sec @ #474 2055
	104	555	2120	2.0 → 3.0	1320	"	"	"	CHANGE DELAY → 3.0 #596 @ 2133
	105	649	2149	3.0	1330	"	"	"	
	106	741	2218	3.00	1340				
	107	835	2247	3.00	1360				
	108	928	2315	3.00	1350				
	"	995	2336						[guns] shut down - computer trouble.
7/29/80	109	1100	0009	3.00	1350				resume line - guns on.
	110	1193	0037	3.00	1350				low fuel SB # all over at 0032 GMT
	111	1298	0107	3.00	1350				
	112	1381	0135	3.00	1350				
	113	1476	0205	3.00	1350				
	114	1569	0233	3.00	1320				
	115	1663	0302	3.00	1300				missed 3 SLTs - TFX-2 returned.
	116	1759	0332	3.00	1300				



VEMA  
R/V ROBERT D. CONRAD  
Cruise: V36-13  
Line: 67

RECORDING LOG  
MCS

W Luzon Margin

DFS IV  
Format: SE6-13  
BPI: 800

(87)

Date GMT	Tape #	Shot Point #	Time GMT	Trip Delay msec	Depth Fm	Pop Rate sec	Samp. Rate msec	Rec. L. msec	Comments
7/29/80	117	1853	0401	3000	1280	18.0	4	12K	PORT GUN OFF @ 0354
	"	1860	0403	3000 2000					change TB delay to 2000 msec.
	"	~1863	0406						gun 2 on again @ 0406
			0407						SB # 212 @ 0407
	118	1945	0429	2000	1260	"	"	"	birds: 54'/36'
?	119	<del>2037</del> 2048	<del>0455</del> 0501	"	1200	"	"	"	lost 11 shots - TPX2 renewed
	120	2140	0530	"	1190	"	"	"	
	121	2232	0558	"	1180	"	"	"	
	122	2324	0627	"	1200	"	"	"	
	123	2416	0655	"	1230	"	"	"	
	124	2509	0724	"	1260	"	"	"	
		2567	0741						SB # 213 @ 0741
	125	2605 <sup>2600</sup>	0753	"	1300	"	"	"	lost 4 shots - TPX2 renewed
	126	2697	0822	3000	1315	"	"	"	change delay to 3000 msec.
	127	2790	0850	"	1325	"	"	"	
	128	2883	0919	"	1340	"	"	"	
	129	2977	0948	"	1350	"	"	"	
	130	3073	1018	"	1360	"	"	"	missed 3 shots, TPX1 feedback
	131	3166	1046	"	1375	"	"	"	

Line: 67

Lucas M C S Nargin

BPI: 800

83

[illegible]

Line: 257

BPI: 500

[illegible]