

(200)
R290

U. S. Geological Survey
Open-File Report 76-180

· 1976

Acoustic-Reflection Profiles
R/V SAMUEL P. LEE, Nov., 1975
Monterey Bay to San Luis Bay
Central California Offshore

Chief Scientist: D. S. McCulloch

OFR 76-180

*Denver has reproducibles of plates only.
3 rolls of microfilm in microfilm file.*

This report is preliminary and
has not been edited or reviewed
for conformity with Geological Survey
standards or nomenclature.

Note: During the November, 1975 R/V LEE cruise off central California several types of seismic profiles were obtained. Separate log books were kept for each profiling system and, in this report, the logs appear in the following order:

1. 3 sec. sweep, deep-penetration (also called 120kJ Sparker)
2. 1/4 sec. sweep, high-resolution (also called Uniboom)
3. 1 sec. sweep, high-resolution (also called 3.5kHz; bathymetry)

The cruise was planned to have a geophysical part (leg 1) during which all three seismic profiling systems would be operated (lines 401-552), and a sampling part (leg 2) during which only high-resolution data would be taken in conjunction with sampling (lines 1-27). Winch problems during leg 2, however, resulted in additional time for obtaining records using all three seismic systems (lines 553-565).

Scientific Log Book

3 sec. sweep (120kJ Sparker) profiles

DAFE 2/TS

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LOCATOR NCAL - 75- L1

DAFE 2/75

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LOCATOR NCAL 75 L1

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
310	0340	413			227	4.5				0-2196	3	3		98	40		speed Increase
310	0347	416			168	4.7				0-2196	3	3		98	40		START Line 416
310	0421	416			170	4.0				" "	" "	" "		"	"		END Line 416
310	0427	417			046	4.2				" "	" "	" "		"	"		START Line 417
310	0534	417			060	4.0				" "	" "	" "		"	"		decreased speed to 3.5 increase speed to 4.0
310	0651	417			046	3.5				" "	" "	" "		"	"		END Line 417
310	0657	420			163	4.5				" "	" "	" "		"	"		START Line 420
310	0720	420			163	4.5				" "	" "	" "		"	"		END Line 420
310	0724	421			226	4.5				" "	" "	" "		"	"		START Line 421
310	0800	421			"	4.0				" "	" "	" "		"	"		NEW WATCH
310	0957	421			143	4.2				" "	" "	" "		"	"		END LINE 421
310	1002	424			141	5.0				" "	" "	" "		"	"		START LINE 424
310	1019	424				4.7				" "	" "	" "		"	"		END LINE 424
310	1024	425			045	4.0				" "	" "	" "		"	"		START LINE 425
310	1200	425			039	4.0				" "	" "	" "		"	"		Δ Watch 2
310	1226	425			040	4.5				" "	" "	" "		"	"		END Line 425
310	1230	428								" "	" "	" "		"	"		START Line 428

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEE

CHIEF SCIENTIST Mc Culloch

EQUIP TYPE BURG processed 120K-J SPARKER

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RECORDED TYPE/NO. RAYTHEON

LOCATOR NCAL 75 L 1

[illegible]

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEE


CHIEF SCIENTIST McCulloch

EQUIP. TYPE 120 KJ Sparker

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RECORDER TYPE/NO. UGR 186

LOCATOR NCA 75 L1

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER 	COMMENTS	
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH			LOW
310	2033	444	1	-	115	5	114			0-2196	3	3		98	40	120	END LN 444
310	2040	445	1		233	4	137			"	"	"		"	"	"	START LN 445
310	2155	445			258	5	792			"	"	"		"	"	"	END LN 445
310	2104	448			140	6	860			"	"	"		"	"	"	START LN 448
310	2220	448			140	6	950			"	"	"		"	"	"	END LN 448
310	2250	449			61	4	800			"	"	"		"	"	"	START LN 449
310	2339	449			61	4	58			"	"	"		"	"	"	END LN 449
310	2345	452			116	6	81			"	"	"		"	"	"	START LN 452
310	2357	452			116	6	90			"	"	"		"	"	"	END LN 452
311	0001	453			232	4.0				"	"	"		"	"	"	START LN 453
311	0131	453			232	4.0				"	"	"		"	"	"	END Line 453
311	0131																system off to selectrode
311	0321	457			030	4.5				341152	"	"		"	"	"	START Line 457
311	0400	457	1		036	5.0				"	"	"		"	"	"	Δ WATCH
1	0422					4.7				KEY 0-2250				"	"	"	change key
	0452	457			037	5.1				"	"	"		"	"	"	END LINE 457
	0454	460			137	5.6				"	"	"		"	"	"	Start Line 480

DATE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

EQUIP TYPE 120 KJ SPARKER (unprocessed)PAGE 5 OF 23SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO UGR-186LOCATOR NCAL 75 11 10

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
311	0517	460		138	5.6				0-2196	3	3		98	40		END Line 460
311	0521	461		225	4.6				0-2196	"	"		"	"		START Line 461
311	0618	461		230	4.5				3/4 key	"	"		"	"		CHANGE key 0 to 3/4
311	0649	461		228	3.8				"	"			98	40		Sparkers stop
311	0651	461		228	3.3				"	"			"	"		start
311	0656	461		225	3.9				"	"	"		"	"		End Line 461
311	0701	464		140	5.0				"	"	"		"	"		START Line 464
311	0719	464		140	4.5				"	"	"		"	"		END 464
311	0725	465		046	4.5				"	"	"		"	"		START 465
311	0857	465							0-2196	"	"		"	"		END 465
311	0902	468							"	"	"		"	"		START 468
311	0917	468							"	"	"		"	"		END 468
311	0923	469							"	"	"		"	"		START 469
	1000	469							3/4 KEY							
	1025	469														END 469
	1030	472														START 472

DATE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

EQUIP TYPE 120 KJ SPARKER - unprocessedPAGE 6 OF 23SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO UGR-186LOCATOR NCAL 75 11 10

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
311	0648	472							3/4 KEY	3	3		98	40	120 KJ	END 472
	1051	473							"							START 473
	1107	473							0-2196							
311	1200	473		039	5.5				"	3	3		"	"	"	Δ WATCH
311	1201	473		"	"				"	"	"		"	"	"	END Line 473
311	1204	476		153	5.0				"	"	"		"	"	"	START Line 476
311	1226	476		155	5.5				"	"	"		"	"	"	END Line 476
311	1229	477		222	5.0				"	"	"		"	"	"	START Line 477
311	1315	477		226	5.5				3/4 key	"	"		"	"	"	Δ 3/4 key scale
311	1336	477		230	5.5				"	"	"		"	"	"	END Line 477
311	1357	480		140	5.3				"	"	"		"	"	"	START Line 480
311	1357	480		137	5.3				"	"	"		"	"	"	END Line 480
311	1403	481		044	5.2				"	"	"		"	"	"	START Line 481
311	1415	481		049	5.0				0-2196	"	"		"	"	"	Δ 0-2196 key
311	1515	481		050	4.4				"	"	"		"	"	"	END Line 481
311	1517	484		105	5.0				"	"	"		"	"	"	START Line 484
311	1539	484		106	5.4				"	"	"		"	"	"	END Line 484

U.S.G.S. ACOUSTIC EQUIPMENT LOG

EQUIP TYPE 120 KJ SPARKER unprocessedPAGE 7 OF 23SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO UFR-186LOCATOR NCAL 75 19
Arise VI 10

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
311	1546	485			230	4.5				0-2196	3	3		98	40	120KJ	START LINE 485
311	1600	485			229	5.0				0-2196	"	"		"	"	"	A WATCH
311	1721	485				4.5				"	"	"		"	"	"	END 485
311	1730	488				"				"	"	"		"	"	"	START 488
311	1752	488				"				"	"	"		"	"	"	END 488
311	1757	489				"				"	"	"		"	"	"	START 489
311	1927	489				"				"	"	"		"	"	"	END 489
311	1931	492				"				"	"	"		"	"	"	START 492
311	1951	492				"				"	"	"		"	"	"	END 492
311		493								"							START 493
311		493			229	4.5				"							END 493
311		494								"							START 494
311	2154																DOWN FOR SYSTEM CLEANING
311	2313	495	1		44	4.2				0-2196							START 495
312	0000	495	1		39.1	4.4				0-2196	3	3		98	40		change watch Larson
312	0024	495															END LINE 495
	0028	496															START 496

U.S.G.S. ACOUSTIC EQUIPMENT LOG

EQUIP TYPE 120 KJ SPARKERPAGE 8 OF 23SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO RAYTHEONLOCATOR NCAL 75 11
Arise VI 10

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
312	0042	496	1							0-2196	3	3		98	40	120	END LINE 496
	0045	497								"	"	"					START LINE 497
	0208	497								"	"	"					END LINE 497
	0211	498								"	"	"					START LINE 498
	0232	498								"	"	"					END LINE 498
	0234	499								"	"	"					START LINE 499
	0410	499								"	"	"					END LINE 499
	0410	500	1							"	"	"					START LINE 500
	0441	500								"	"	"					END LINE 500
	0445	501								"	"	"					START LINE 501
	0609	501								"	"	"					END LINE 501
	0615	502								"	"	"					START LINE 502
	0633	502								"	"	"					END LINE 502
	0639	503								"	"	"					START LINE 503
	0708	503								"	"	"					END 503
	0812	504								"	"	"					START 504
	0826	504								"	"	"				"	END 504

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

EQUIP TYPE 120 KJ SPARKERPAGE 9 OF 23SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO RAYTHEONLOCATOR NCAL 75 L1

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDED				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
312	0930	505	1							0-2196	3	3		98	40	120	START 505
	0952	505								↓	↓	↓		↓	↓	↓	END 505
	0958	506															START 506
	1013	506															END 506
	1018	507															START 507
	1101	507															END 507
	1150	508															START 508
	1214	508															END
	1222	509															START 509
	1313	509															END L. 509
	1317	510															START L. 510
	1330	510															END L. 510
	1341	511															START L. 511
	1450	511															END L. 511
	1453	512															START L. 512
	1512	512															END L. 512
✓	1514	513	✓														START L. 513

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

EQUIP TYPE 120 KJ SPARKERPAGE 10 OF 23SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO RAYTHEONLOCATOR NCAL 75 L1

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDED				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
312	1626	2	1							0-2196	3	3		98	40	120	END L. 513
	1630																START L. 514
	1651																END L. 514
	1654																START L. 515
	1815																END L. 516 RECORDED OFF
	2130		2														START ROLL #2
	2200	517	2		238.9	5.1											START OF LINE 517
	2319	517	2								3	3		98	40		END OF LINE 517
	2323	518	2								3	3		98	40		START OF LINE 518
	2334	518	2								3	3		98	40		END OF LINE 518
	2338	519	2		29.6	4.2					3	3		98	40		START OF LINE 519
313	0002	519	2		37	4.0					3	3		98	40		VALLIER RELIEVES BRANS
"	0053	519	2		"	"					"	"		"	"		Burg Recorder on
"	0123	519	2		"	"					"	"		"	"		END LINE 519
"	0127	520	"		148	5.0					"	"		"	"		START LINE 520
"	0140	520	"		"	"					"	"		"	"		END LINE 520
"	0143	521	"		239	3.4					"	"		"	"		START LINE 521

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEECHIEF SCIENTIST McCulloughEQUIP. TYPE 120 KT SparkerRECORDER TYPE/NO. RaytheonPAGE 11 of 23LOCATOR NCAL 75 L1
Area Yr ID

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
313	0256	521	2		246	2.8					3	3		98	40	120	END LINE 521
313	0258	522	"		117	6.1					"	"		"	"	"	START LINE 522
"	0313	522	"		"	"					"	"		"	"	"	END LINE 522
"	0315	523	"		027	2.1					"	"		"	"	"	START LINE 523
"	0330	523			—						"	"		76	40	"	Filter Change
"	0400	523	"		024	4.5					"	"		"	"	"	KERR Relieves Vallier
"	0410	523	"		"	"					"	"		"	"	"	END 523
"	0413	524	"		"	"					"	"		"	"	"	START 524
"	0421	524	"		180	5.4					"	"		"	"	"	END 524
"	0431	525	"		236	4.1					"	"		"	"	"	START 525
"	0530	525	"		144	5.0					"	"		"	"	"	END 525
"	0532	526	"		131	5.5					"	"		"	"	"	START 526
"	0556	526	"		73	4.0					"	"		"	"	"	END 526
"	0557	527	"		31	3.5					"	"		"	"	"	START 527
"	0655	527	"		43	4.9					"	"		"	"	"	END 527
"	0658	528	"		138	5.4					"	"		"	"	"	START 528
"	0718	528	"		142	4.2					"	"		"	"	"	END 528

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEECHIEF SCIENTIST McCulloughEQUIP. TYPE 120 KT SparkerRECORDER TYPE/NO. RaytheonPAGE 12 of 23LOCATOR NCAL 75 L1
Area Yr ID

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
313	0721	529	2		236	3.0					3	3		76	40	120	START 529
"	0800	529	"		—						"	"		"	"	"	Brandon relieves Kerr
313	0817	529	2		206	4.3					3	3		98	40	120	END 529
313	0823	530	2		149	6.4					3	3		98	40	120	START 530
313	0843	530	2		117	4.6					3	3		98	40	120	END 530
313	0848	531	2								3	3		98	40	120	START 531
313	0945	531	2								3	3		98	40	120	END 531
313	0947	532	2								3	3		98	40	120	START 532
313	1007	532	2								3	3		98	40	120	END 532
313	1012	533	2		223	5.2					3	3		98	40	120	START 533
313	1115	533	2								3	3		98	40	120	END 533
313	1120	534	2		148	6.1					3	3		98	40	120	START 534
313	1158	534	2								3	3		98	40	120	END 534
313	1202	535	2								3	3		98	40	120	START 535
313	1220	535	2								3	3		98	40	120	RELIEVES BRANDON
313	1354	536	2								3	3		76	40	120	BEGIN LINE 536 - NO NOTIFICATION OF END OF 535
313	1411	536	2		130	4.0					3	3					END 536

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE

120 KT Sparker

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SHIP LEE

CHIEF SCIENTIST

McCulloch

RECORDER TYPE/NO

UGR 186

LOCATOR

NCL 75 L1

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER	COMMENTS	
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH			LOW
314	0938	475	2	19	055	5.2					3	3		76	40	120	ST LINE 475
314	1044	475	3	19							"	"		"	"	"	END LN 475
314	1047	474	3	19										"	"	"	START LN 474
314	1107	474	3	19										"	"	"	END LINE 474
314	1113	471	3	19	230	4.5					3	3		"	"	"	ST LINE 471
314	1225	471	"	"	"	"					3	3		"	"	"	BURST CONJ. OFF 1220 → 1221
314	1228	471	"	"	230	"					3	3		"	"	"	END LINE 471
314	1229	470	"	"	310	4.5					3	3		"	"	"	START LINE 470
314	1252	470	"	"	312	4.5					"	"		"	"	"	END LINE 470
314	1254	467	"	"	054	4.9					"	"		"	"	"	START LINE 467
314	1421	467	"	"	20	"					"	"		"	"	"	END LINE 467
314	1423	466	"	"	20	322	4.7				"	"		"	"	"	START LINE 466
314	1407	467	"	"	19	-	-				"	"		"	"	"	END MAG TAPE 19
314	1411	467	"	"	20	-	-				"	"		"	"	"	START MAG TAPE 20
314	1442	466	"	"	320	4.8					"	"		"	"	"	END LINE 466
314	1446	463	"	"	216	4.2					"	"		"	"	"	START LINE 463
	1605																Δ WATCH

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE

120 KT SPARKER

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SHIP LEE

CHIEF SCIENTIST

McCulloch

RECORDER TYPE/NO

UGR 186

LOCATOR

NCL 75 L1

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER	COMMENTS	
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH			LOW
314	1613	463	2	20	312	3.9					3	3		76	40	120	END LINE 463
314	1615	462	1	1	X	X					1	1		1	1	1	START LINE 462
314	1643	462	1	1	318	2.5					1	1		1	1	1	END LINE 462
314	1646	459	1	1	425	5.0					1	1		1	1	1	START LINE 459
314	1744	459			365	4.4					3	3		76	40	120	SWITCHED KEY TO 0
314	1818	459	1	1	254	4.9					1	1		1	1	1	END LINE 459
314	1821	458	1	1	301	5.4					1	1		1	1	1	START LINE 458
314	1849	458	1	1	311	4.3					1	1		1	1	1	END LINE 458
314	1851	455	1	1	231	31					1	1		1	1	1	START LINE 455
314	1948	455	1	21	237	5.2					1	1		1	1	1	SWITCH KEY TO 3/4
314	2019	455	3	21	230	3.9					3	3		76	40	120	END LINE 455
314	2022	454	3	21	318	4.1					3	3		76	40	120	ST LINE 454
314	2058	451	3	21	11.9	4.7					3	3		76	40	120	SWITCHED KEY TO 0
314	2047	454	3	21							3	3		76	40	120	END LINE 454
314	2054	451	3	21							3	3		76	40	120	ST LINE 451
314	2156	451	3	21							3	3		76	40	120	END LINE 451
314	2200	450	3	21							3	3		76	40	120	ST LINE 450

DATE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEE

CHIEF SCIENTIST

McCulloch

EQUIP TYPE

120 KT SPARKER

RECORDER TYPE/NO

UGR 186

LOCATOR

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TO

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
314	2232	447	2	21	229	5.8							76	40	120	START LINE 447
314	2227	450	3	21									76	40	120	END LINE 450
314	2331	447	3										"	"	"	END LINE 447
315	0038	446	3	322	3.8								"	"	"	SYSTEM DOWN FOR MAINTENANCE START LINE 446
315	0043	446	3	21									"	"	"	BURG UP
315	0042	446	3										"	"	"	SPARKERS ON
315	0105	446	3										"	"	"	END LINE 446
315	0107	443	3	28	2.9								"	"	"	START LINE 443
315	0144	443	21													END MAG TAPE #21
315	0148	443	22													ST MAG TAPE #22
	0200														80	Cut power to 80KJ ABOUT THIS TIME
	0219	443													80	END LINE 443
	0223	442													80	START LINE 442
	0240															Recorder Stacking Traces
	0252															ENA LINE - SYSTEM DOWN FOR CLEANING
	0258	439														SYSTEM UP NEW LINE
	0358	439	✓													END OF LINE

DATE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEE

CHIEF SCIENTIST

McCulloch

EQUIP TYPE

120 KT SPARKER

RECORDER TYPE/NO

Ranther

LOCATOR

NCALPAGE 18 OF 23

TO

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
	0432	438	2	308	2.1					3	3		76	40	80	START 438
315	0432	438	1	309	1.8					"	"		"	"	"	SWITCH KEY TO 74
315	0435	438	1	309	2.0					"	"		"	"	"	END 438
315	0437	435	1	38	3.4					"	"		"	"	"	START 435
315	0604	435	"	367	3.5					"	"		"	"	"	END 435
315	0606	434	1	320	3.7					"	"		"	"	"	START 434
315	0643	434	1	315	2.6					"	"		"	"	"	END 434
315	0646	431	1	233	4.2					"	"		"	"	"	START 431
315	0742	431	"							"	"		"	"	"	END 431
315	0745	430	"							"	"		"	"	"	START 430
315	0816	430	1							"	"		"	"	"	END 430
315	0819	427	1	033	4.0					"	"		"	"	"	START LINE 427
315	0949	427	1	"	"					"	"		"	"	"	END LINE 427
315	0954	426	1	"	"					"	"		"	"	"	START LINE 426
315	1022	426	1	"	"					"	"		"	"	"	END LINE 426
315	1024	423	1	232	4.9					"	"		"	"	"	START LINE 423
315	1158	423	1	224	5.0					"	"		"	"	"	Operator on watch

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE 120 KJ SPARKERPAGE 19 OF 23SHIP LEE-P Phroggy CHIEF SCIENTIST McCullochRECORDER TYPE/NO UGR-186LOCATOR NAL 75 6.1

JULIAN DAY	TIME GMT	LINE #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER <u>KV</u>	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
315	1208	422	23	315	3.8				0-2196	5	5		76	40	120	START Line 422
315	1221	422	23						"	"	"					END MAGTAPE 23
315	1226	422	24	352					"	"	"		"	"	"	START MAG TAPE 24
315	1237	422	24	344					"	"	"		"	"	"	END Line 322
315	1238	419		043	3.4				"	"	"		"	"	"	START Line 419
315	1446	419							"	"	"		"	"	"	END Line 419
315	1449	418		353	4.4				"	"	"		"	"	"	START Line 418
315	1515	418		359	4.2				"	"	"		"	"	"	END Line 418
315	1517	415		212	5.4				"	"	"		"	"	"	START Line 415
"	1600	415		-	-				"	"	"		"	"	"	A Watch (Kerran)
"	1745	"		-	-				"	"	"		"	"	"	END LINE 415
"	1750	414		-	-				"	"	"		"	"	"	START LINE 414
"	1832	"		-	-				"	"	"		"	"	"	END LINE 414
"	1835	411		-	-				"	"	"		"	"	"	START LINE 411
	2057	411	324													END LINE 411
	2059	410	324	355	4.0				"	"	"		"	"	120	ST LN 410
	2139	410	324													END LN 410

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE 120 KJ SparkerPAGE 20 OF 23SHIP LEE CHIEF SCIENTIST McCullochRECORDER TYPE/NO UGR 186LOCATOR NAL 75 1.1

JULIAN DAY	TIME GMT	LINE #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER <u>KV</u>	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
315	0144	407	224	228	6.0		3m	.3m	0-2196	3	3		76	40	120	ST LN 407
315	2330	407	25	24	3.1		3M	.3M	0-2196	3	3	NORMAL	76	40	120	END LN 407 - SYSTEM
315	2348															BURG DOWN
315	2352	406														BURG UP
315	2352	406	25	37.7	4.6											BEGIN LINE 406
316	0015	406	25	355.1	3.8					3	3		76	40	120	BEGIN LINE 406
316	0030	406	25	346.9	4.7					3	3		76	40	120	END LINE 406
316	0033	403	25	33.7	4.4					3	3		"	"	"	ST LINE 403
316	0256	403														END ROLL 2, END LINE 403 SPARKERS DOWN, BURG DOWN START ROLL 4
316	0257	402														ST LINE 402
316	0310	402														END LINE 402
316	0312															ALL SYSTEMS UP; SPARKERS, BURG, RAINIER
316	0313	401	3	216	5.9					3	3		76	40	120	ST LINE 401
316	0344	401								"	"		"	"	"	END LINE 401
316	0318	552								"	"		"	"	"	ST LINE 552
316	0618	552	106							"	"		"	"	"	END LINE 552

USGS ACOUSTIC EQUIPMENT LOG

SHIP LEE

CHIEF SCIENTIST

McCURCHEQUIP TYPE 120 KI SPARKER

RECORDER TYPE/NO

UGR 186PAGE 21 OF 23

LOCATOR

N. CAL 25 11

JULIAN DAY	TIME GMT	LINE #	REAL #	REEL #	COURSE	SPEED	DEPTH			HYDRO				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
316	0619	550	3	26							3	3		76	40	120	START LINE 550
316	0821	550		26	181	11	200	.3M	.3M		3	3	NORM	76	40	120	END LINE 550
316	0826	549		26	181	11											ST LINE 549
316	0859	549		26													END LINE 549
	0857	548		26													ST LINE 548
	0955	548		26	82.9	1.2	72.0	.3M	.3M		3	3	NORM	76	40	120	END LINE 548
	1002	549		26	138	5.2	87	"	"		"	"	"	"	"	"	ST LINE 549
316	1200	549		26	133	4.8					"	"		"	"	"	Carpet on watch
316	1256	544		26	133.6	5.0											BURG DOWN, END MAGTAPE #26
"	1600	544			-	-	"	"	"		"	"	"	"	"	"	Δ Watch Kurr on
"	1601	544			-	-	"	"	"		"	"	"	"	"	"	END LINE 544
"	1602	542			150	5.0	"	"	"		"	"	"	"	"	"	START LINE 542
"	1905	542		3	-	-	"	"	"		"	"	"	"	"	"	END LINE 542

End 3.0 sec. profiles- Leg 1

Begin 3.0 sec. profiles-Leg 2

DATE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEE

CHIEF SCIENTIST W McCULLOCH

EQUIP. TYPE 120 KS SPARKER

RECORDER TYPE/NO. UGP-TELETYPE

PAGE 22 OF 23

LOCATOR NAL 75 LI

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH		SCALE	RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE		RECEIVER	SWEEP	SHOOT	PROGRAM	HIGH		
321	1730	—	4	31	070	4.5			0-1200fm	3 sec	3	NORM	98	40	80 K	PROCEEDING TOWARD EAST OF LINE 553
	1730	—			11	11										
	1744	553		31	010	4.5	45									START LINE 553
	1800				08	5.2	49									SHRYOCK on watch
	1846				309	49	43									END LINE 553
	1849	554			310	4.1	46						76	40		START LINE 554
	1915	554			302	4.0										END LINE 554 2 minor course change
	1917	555			310	4.5	54									START LINE 555
	2025	555			317	4.5										END 555
	2214	556			325	4.5	64									START 556
	2311	557			296	4.5	47									END 557
322	0000	558			300	37	56									IT IS MIDNITE IN ENGLAND
	0021	558			302	4.2	56									END 558 BURG DOWN
	0024	559														START 559
	0024			32												NEW BURG TAPE
	0151	559			304	4.4	51									END 559
	0300	560			321	4.7	44									START 560
	0312	561			280		51									END 560
																START 561
																COURSE CHANGE TO OFFSHORE

PAGE 23 OF 23

LOCATOR 11-516 75 41

End 3.0 sec. profiles-Leg 2

Scientific Log Book

1/4 sec. sweep (Uniboom) profiles

Begin 1/4 sec. profiles-Leg 1

DATE 2/75

USGS ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE UNIBOOMPAGE 1 OF 33SHIP LEECHIEF SCIENTIST McColloughRECORDER TYPE/NO RANTHEW EPCLOCATOR NCAL 75 L1

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
309	1920	405	1														Uniboom shut down for
																	recorder change -
309	1950	405	1		225	3.1	40m	Hull	1/3m	1/4	1/4			1900	800		START UNIBOOM ON EPC - 218 RECORDER
309		405	1		218	3.9	"	"	"	1/4	1/4			1900	800		end of Track 405
309		408	1		152	4.4	"	"	"	1/4	1/4			1900	800		start of Track 408
309	2231	408	1		155	3.5								1900	800		END of TRACK 408
309	2238	409	1					"	"		"			1900	"		START of TRACK 409
309	2258	409			131	3.3		"	"		1/4	1/4		1900	800		DOWN TO PUT IN
309	2243	409			131			"	"		"	"		"	"		NEW RECORDER BELT
309	2347	409						"	"		"	"		"	"		DOWN TO PUT IN
309	2350	409			47	4.6		"	"		"	"		"	"		NEW RECORDER BELT
310	0000	409			44	4.5		"	"		"	"		"	"		WHICH CAME KITTILSON - TRACY
310	0043	409			047	4.2											END LINE 409
310	0046	412			136	3.4											START LINE 412
310	0119	412			170	3.1											END LINE 412
310	0119																DOWN TO PUT IN ROLL #2
310	0123	413															START LINE 413 - STILL DOWN

DATE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE UniboomPAGE 2 OF 33SHIP LEECHIEF SCIENTIST McColloughRECORDER TYPE/NO EPCLOCATOR NCAL 75 L1

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
310	0126	413	2		221	4.3		Hull	1/3m		1/4	1/4		1900	800		START ROLL # 2
310	0230	413	2		"	"		"	"		1/4	1/4		"	"		ERROR IN DEPTH - BY FACTOR OF 4X ON LINES 405, 408, 412 & PARTIAL 413, NOW CORRECTED
310	0310	413	2		232	3.6		"	"		"	"					shut down recorder
310	0312	413	2		231	3.7		"	"		"	"					recorder on
310	0343	413	2		227	4.6		"	"		"	"		1900	800		END LINE 413
310	0346	416	2		168	5.0		"	"		"	"		1900	800		BEGIN LINE 416
310	0400	416	2		168	5.3		"	"		"	"		"	"		ROUTINE GATEWAY - MOUNTAIN (HAWAII) ON WATER
310	0421	416	2		168	4.2		"	"		"	"		"	"		END LINE 416
310	0427	417	2		046	4.6		"	"		"	"		"	"		START LINE 417
310	0529	417	2		050	3.7		"	"		"	"		"	"		END ROLL #2
310	0538	417	3		061	3.7		"	"		"	"		"	"		START ROLL #3
310	0650	417	3		061	4.0		"	"		"	"		"	"		END LINE 417
310	0657	420	3		163	4.6		"	"		"	"		"	"		START LINE 420
310	0720	420	3		163	4.5		"	"		"	"		"	"		END LINE 420
310	0724	421	3		276	4.4		"	"		"	"		"	"		START LINE 421
310	0820	421	3		231	4		"	"		"	"		"	"		WATCH CLEANER HAMP TON - KITTILSON

USGS ACOUSTIC EQUIPMENT LOG

SHIP LEE

CHIEF SCIENTIST

McCulloch

EQUIP TYPE

UNIBOOM

RECORDER TYPE/NO

EPC

LOCATOR

NALPAGE 3 OF 3375LI

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
310	0957	421	3		220	4.7		HULL	1/3m	91.5-2738	1/4	1/4		1900	800		END LINE
310	1002	424	3		141	4.9		"	"	"	"	"		"	"		START LINE
310	1019	424						"	"	"	"	"		"	"		END LN 424
310	1024	425			045			"	"	"	"	"		"	"		BEGIN LN 425
310	1034	425			045			"	"	"	"	"		"	"		CHANGE ROLL 3
310	1044	425			047			"	"	958-278	"	"		"	"		START ROLL 4
310	1155	425	4		040	4.0		"	"	0-183	1/4	1/4		1900	800		WATCH CHANGE - VALLEY
310	1226	425	4		038	3.5		"	"	0-183	1/4	1/4		"	"		END LINE 425
310	1230	428	"		185	5.2		"	"	"	"	"		"	"		START LINE 428
310	1258	428	"		4.0			"	"	0-183	1/4	1/4		"	"		END LINE 428
310	1259	429	"		236	3.5		"	"	"	"	"		"	"		START LINE 429
310	1433	429	"		233	4.5		"	"	"	"	"		"	"		END LINE 429
310	1436	432	"					"	"	"	"	"		"	"		START LINE 432
310	1500	432	"		130	3.0		"	"	"	"	"		"	"		END LINE 432
310	1500						Shut down RECORDER										START LINE 433
310	1501	433	"		048	2.4											START LINE 433
310	1506	433	"		048	3.5	Recorder ON										

U.S.G.S. ACOUSTIC EQUIPMENT LOG

SHIP LEE

CHIEF SCIENTIST

McCullough

EQUIP TYPE

UNIBOOM

RECORDER TYPE/NO

EPC

LOCATOR

NALPAGE 4 OF 3375LI

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
310	1507	433	"		048	3.5		Hull	1/3m		1/4	1/4		1900	800		end Roll #4
310	1536	433	5		048	3.5		"	"		1/4	1/4		1900	800		START ROLL #5
310	1620	435	5		047	4.4		"	"		"	"		"	"		ROUTINE ENTRY - PAUSE HARDWARE CAL WATCH
310	1630	433	5		047	4.4		"	"		"	"		"	"		END LINE 433
310	1634	436	5		141	4.6		"	"		"	"		"	"		START LINE 436
310	1652	436	5		141	4.0		"	"		"	"		"	"		END LINE 436
310	1703	437	5		240	3.3		"	"		"	"		"	"		START LINE 437
310	1820	437	5		240	3.5		"	"		"	"		"	"		END LINE 437
310	1828	440	5		139	4.5		"	"		"	"		"	"		START LINE 440
310	1853	440	5		139	4.6		"	"		"	"		"	"		END LINE 440
310	1910	441	5		52.6	2.8		"	"		"	"		"	"		START LINE 441
310	2000	441	5		31.8	3.9		"	"		"	"		"	"		ROUTINE ENTRY SKITTELSON ON WATCH
310	2015	441	5		INTURN			"	"		"	"		"	"		END ROLL #5
310	2034	444	6					"	"		"	"		"	"		START ROLL #6
310	2034	444	6					"	"		"	"		"	"		DID NOT RECORD LINE 444
310	2040	445	6		232	2.2		"	"		"	"		"	"		START LINE 445
310	2155	445	6		258	5		"	"		"	"		"	"		END LINE 445

U.S.G.S. ACOUSTIC EQUIPMENT LOG

EQUIP TYPE UNI BoomPAGE 5 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NAL 75 41

JULIAN DAY	TIME GMT	LINE #	ROLL #	WHEEL #	COURSE	SPEED	DEPTH		SCALE	RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
310	2204	448	6		140	6		HULL	1/3m	1/4	1/4		1900	800		START LN 448
310	2220	448	6		140	6		"	"	"	"		"	"		END LN 448
310	2226	449	6		61	4		"	"	"	"		"	"		START LN 449
310	2339	449	6		61	4		"	"	"	"		"	"		END LN 449
310	2345	452	6		119	6		"	"	"	"		"	"		START LN 452
311	0000	452	6		117	6		"	"	"	"		"	"		VALLIER RELIEVES KIDMAN
310	2357	452	6		"	"		"	"	"	"		"	"		END LN 452
311	0001	453	6		240	3.5		"	"	"	"		"	"		START LN 453
311	0050	453	6		240	4.5		"	"	1/4	1/4		"	"		TANNER RELIEVES VALLIER
311	0115	453	6		"	"		"	"	"	"		"	"		VALLIER " TANNER
311	0131	453	6		211	5.5		"	"	"	"		"	"		END LINE 453-START
311	0321	457	7		030	4.5		"	"	"	"		"	"		START LINE 457, SKIP 4
311	0400	457	7		033	4.4		"	"	"	"		"	"		HAMPTON RELIEVES VALLIER
311	0452	457	7		033	4.4		"	"	"	"		"	"		END LINE 457 DOWN
311	0454	460	7		141	5.2		"	"	"	"		"	"		START LINE 460 DOWN
311	0508	460	7		141	5.2		"	"	"	"		"	"		RE-START UNIBOOM
311	0517	460	7		141	5.3		"	"	"	"		"	"		END LINE 457

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE UNIBOOMPAGE 6 OF 33SHIP LEECHIEF SCIENTIST McCULLOCHRECORDER TYPE/NO EPCLOCATOR NAL 75 41

JULIAN DAY	TIME GMT	LINE #	ROLL #	WHEEL #	COURSE	SPEED	DEPTH		SCALE	RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
311	0521	461	7		225	4.6		HULL	1/3m	1/4	1/4		1400	800		START LINE 461
311	0656	461	7		225	3.8		"	"	"	"		"	"		END LINE 461
311	0701	464	7		140	5.1		"	"	"	"		"	"		START LINE 464
311	0719	464	7		134	6.0		"	"	"	"		"	"		END LINE 464
311	0725	465	7		046	3.4		"	"	"	"		"	"		START LINE 465
311	0743	465	7		046	3.4		"	"	"	"		"	"		END ROLL 7
311	0749	465	8		046	3.4		"	"	"	"		"	"		START ROLL 7
311	0800	465	8		018	1.0		"	"	"	"		"	"		ROUTINE ENTRY S. KIDMAN ON WATCH
311	0812	465	8		019	4		"	"	"	"		"	"		SHUT DOWN REPAIR BELT ON RECORDER
311	0818	465	8		030	4		"	"	"	"		"	"		RECORDER REPAIRED
311	0857	465	8					"	"	"	"		"	"		END LINE 465
311	0902	468	8					"	"	"	"		"	"		START LINE 468
311	0907	468	8					"	"	"	"		"	"		END LINE 468
311	0922	469	8		220	5		"	"	"	"		"	"		START LINE 469
311	1025	469	8		220	5		"	"	"	"		"	"		END LINE 469
311	1030	472	8		144	6		"	"	"	"		"	"		START LINE 472
311	1046	472	8		142	5		"	"	"	"		"	"		REPLACE RECORDER BELT

U.S.G.S. ACOUSTIC EQUIPMENT LOG

EQUIP TYPE UNI BoomPAGE 7 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR 17AL 75 11

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH		SCALE	RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
311	1048	472			144	5		HULL	1/3m	1/4	1/4		1900	800		END LINE 472
311	1049	TURN			35	5		"	"	"	"		"	"		RECORDER OPERATIONAL
311	1051	473			34	5		"	"	"	"		"	"		START LINE 473
311	1110	473			34	5		"	"	"	"		"	"		SHUT DOWN RECORDER BELT
311	1112	473			33	5		"	"	"	"		"	"		OPERATIONAL
311	1200	473			33	5		"	"	"	"		"	"		WATCH CHNGE-TRACE
311	1201	473			34	5		"	"	"	"		"	"		END OF LINE 473
311	1204	476			170	4.7		"	"	"	"		"	"		START LINE 476
311	1226	476			175	4.6		"	"	"	"		"	"		END LINE 476
311	1229	477			220	5.3		"	"	"	"		"	"		START LINE 477
311	1314	477			221	5.3		"	"	"	"		"	"		Chg To Roll 9, Chg Belt
311	1330	477	9		228	5.0		"	"	"	"		"	"		UNI BOOM ON LINE
311	1336	477	9		230	5.5		"	"	"	"		"	"		END LINE 477
311	1336	480	"		140	4.3		"	"	"	"		"	"		START LINE 480
311	1357	480	"		142	5.1		"	"	"	"		"	"		END LINE 480
311	1403	481	"		045	4.3		"	"	"	"		"	"		START LINE 481
311	1515	481	"		050	5.2		"	"	"	"		"	"		END LINE 481

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE UNI ROOMPAGE 8 OF 33SHIP LEECHIEF SCIENTIST McCulloughRECORDER TYPE/NO EPCLOCATOR UCL 75 11

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH		SCALE	RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
311	1516	484	9		106	4.7		HULL	1/3m	1/4	1/4		1400	796		START LINE 484
311	1532	484	9		106	5.4		"	"	"	"		1400	796		END LINE 484
311	Turn	485			Turn	485		"	"	"	"		"	"		HAMPTON POLICE VOLLER
311	1546	485	9		230	5.1		"	"	"	"		"	"		START LINE 485
311	1632	485	9		230	5.1		"	"	"	"		"	"		UNI ROOM OFF
311	1639	485	9		230	5.1		"	"	"	"		"	"		UNI ROOM ON
311	1726	485	9		230	5.0		"	"	"	"		"	"		END LINE 485
311	1733	488	9		144	5.5		"	"	"	"		1500	900		START LINE 488
311	1752	488	9		148	4.0		"	"	"	"		"	"		END LINE 488
311	1757	489	9		046	4.1		"	"	"	"		"	"		START LINE 489
311	1927	489	10		046	4.1		"	"	"	"		"	"		END LINE 489
311	1931	492	10		150	4.4		"	"	"	"		"	"		START LINE 492
311	1951	492	10		140	4.8		"	"	"	"		"	"		END LINE 492
311	1954	493	10		226	4.4		"	"	"	"		"	"		START LINE 493
311	1954	493	10		226	4.4		"	"	"	"		"	"		KITSON RELIEVES HAMPTON
311	2134	493	10		226	4.2		"	"	"	"		"	"		END LINE 493
311	2139	494	10		150	4.5		"	"	"	"		"	"		START LINE 494

U.S.G.S ACOUSTIC EQUIPMENT LOG

EQUIP TYPE UNIBOOM

PAGE 9 OF 33

SHIP LEE

CHIEF SCIENTIST *McCulloch*

RECORDED TYPE/NO **ER**

LOCATOR MSA 75 11

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS	
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOT	PROGRAM	HIGH	LOW			
311	2154	494	10		150	4.5		HULL	0.3M			1/4	1/4		1500	900		END LINE
	2313	495	10		047	4.9		"	"			"	"		"	"		START LINE
312	0000	495	10		038	4.4		"	"			"	"		"	"		VALLIER ON WATCH
312	0024	495	10		038	"		"	"			"	"		"	"		END LINE 495
312	0028	496	10		143	5.3		"	"			"	"		"	"		Begin LINE 496
312	0042	496	10		234	3.8		"	"			"	"		"	"		END LINE 496
312	0046	496	10		234	3.8		"	"			"	"		"	"		END ROLL # 10
312	0054	497	11		288	4.2		"	"			"	"		"	"		BEGIN ROLL # 11
312	0208	497	11		"	"		"	"			"	"		"	"		End LINE 497
312	0211	498	11		140	4.5		"	"			"	"		"	"		Begin LINE 498
312	0232	498	11		"	"		"	"			"	"		"	"		END LINE 498
312	0234	499	11		034	4.0		"	"			"	"		"	"		Begin LINE 499
312	0400	499	11		047	4.0		"	"			"	"		"	"		HAMPTON ON WATCH
312	0410	499	11		"	"		"	"			"	"		"	"		END LINE 499
312	0410	500	11		151	4.0		"	"			"	"		"	"		START LINE 500
310	0441	500	11		125	"		"	"			"	"		"	"		END LINE 500
310	0445	501	11		260	4.1		"	"			"	"		"	"		START LINE 501

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE UN/500m

*PAGE 10 OF 33

SHIP LGE

CHIEF SCIENTIST MCCULLOCH

RECORDED TYPE/NO. EPC

LOCATOR NCAL 75 41

[illegible]

USGS ACOUSTIC EQUIPMENT LOG

EQUIP TYPE UNIBOOMPAGE 11 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NAL 75 LI

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH		RECEIVER	SCALE	RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE			SWEEP	SHOOT	PROGRAM	HIGH	LOW		
312	1141	507	13	-				Hull	3m		1/4	1/4		1500	900		END LN 507
312	1150	508	1					"	"		"	"					VALLIER Relieved Duty
312	1150	508			176	7.0		"	"		"	"		"	"		Begin LN 508
312	1214	508						"	"		"	"		"	"		END LINE 508
312	1221	509			206	4.1		"	"		"	"		"	"		Begin Line 509
312	1221	509						"	"		"	"		"	"		Shut down - Belt
312	1224	509						"	"		"	"		"	"		Turn on
	1251:46	509			238	3.9		"	"								SHUT DOWN DIRTY STILL
	1254	509						"	"								TURN ON
	1258																OFF NEW BELT
	1300	509			245	4.2		"	"		"	"		"	"		ON AGAIN
	1313	509			"	"		"	"		"	"		"	"		END LINE 509
	1317	510			127	5.3		"	"		"	"		"	"		START LINE 510
	1336	510			133	5.1		"	"		"	"		"	"		END LINE 510
	1341	511			046	3.2		"	"		"	"		"	"		START LINE 511
	1451	511			027	3.2		"	"		"	"		"	"		END LINE 511
	1453	512			127	5.5											START LINE 512

U.S.G.S. ACOUSTIC EQUIPMENT LOG

EQUIP TYPE UNIBOOMPAGE 12 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NAL 75 LI

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH		RECEIVER	SCALE	RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE			SWEEP	SHOOT	PROGRAM	HIGH	LOW		
312	1512	512	13		127	5.1		Hull	3m		1/4	1/4		1500	900		END LINE 512
312	1514	513	13		214	4.2		"	"		"	"		"	"		Begin Line 513
312	1528	513	13		—	—		—	—		—	—		—	—		END ROLL #13
312	1552	513	14		260	4.1		—	—		—	—		—	—		START ROLL #14
312	1600	513						"	"		"	"		"	"		ADJUSTED ON WATCH
312	1626	513						"	"		"	"		"	"		END LINE 513
312	1630	514			130	5.5		"	"		"	"		"	"		START LINE 514
312	1651	514			130	5.8		"	"		"	"		"	"		END LINE 514
312	1654	515			31	4.3		"	"		"	"		"	"		START LINE 515
312	1815	515			31	4.3		"	"		"	"		"	"		UNIBOOM DOWN - SHUT BELT
312	1815	515						"	"		"	"		"	"		END LINE 515
312	2200	517			243	5.4		"	"		"	"		"	"		START LINE 517
312	2319	517			243	5.2		"	"		"	"		"	"		END LINE 517
312	2323	518			131	6.1		"	"		"	"		"	"		START LINE 518
312	2331	518			136	6.4		"	"		"	"		"	"		END ROLL 15
312	2334	518			136	6.1		"	"		"	"		"	"		END LINE 518
312	2338	519			27	3		"	"		"	"		"	"		START LINE 519
312	2344	519	15		29	4		"	"					"	"		START ROLL 16

USGS ACOUSTIC EQUIPMENT LOG

EQUIP TYPE

UNIBOON

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SHIP LEE

CHIEF SCIENTIST

McCulloch

RECORDER TYPE/NO

EPC

LOCATOR

NCHL 75

41

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JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
313	000	519	15		37	4.6		HULL	1/3m		1/4	1/4		1900	800		CARPENTER ON WATCH
313	0123	519	15		37	5.0		HULL	1/3m		1/4	1/4		"	"		END LINE 519
313	0127	520	"		143	4.7		"	"		"	"		"	"		START LINE 520
313	0140	520	"		"	"		"	"		"	"		"	"		END LINE 520
313	0143	521	"		239	3.0		"	"		"	"		"	"		START LINE 521
313	0257	521	"		"	"		"	"		"	"		"	"		END LINE 521
313	0259	522	"		"	"		"	"		"	"		"	"		START LINE 522
313	0313	522	"		"	"		"	"		"	"		"	"		END LINE 522
313	0315	523	"		025	2.7		"	"		"	"		"	"		START LINE 523
313	0400	523	15		025	2.7		"	"		"	"		"	"		HAMPTON ON WATCH
313	0410	523	"		"	"		"	"		"	"		"	"		END LINE 523
313	0413	524	"		124	6.8		"	"		"	"		"	"		START LINE 524
313	0426	524	"		124	6.8		"	"		"	"		"	"		END LINE 524
313	0431	525	"		235	3.9		"	"		"	"		"	"		START LINE 525
313	0530	525	"		241	3.7		"	"		"	"		"	"		END LINE 525
313	0532	526	"		129	5.3		"	"		"	"		"	"		START LINE 526 ALSO - INCL. SCALED REELS
313	0546	526	"		129	5.3		"	"		"	"		"	"		END ROLL 1/6 15

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U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE

UNIBOON

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OF 33

SHIP LEE

CHIEF SCIENTIST

McCulloch

RECORDER TYPE/NO

EPC

LOCATOR

NCHL 75

41

10

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
313	0556	526	"		"	"		HULL	0.3m		1/4	1/4		1900	800		(UNIBOON OFF) END LINE 526
313	0557	527	"		32	2.5		"	"		"	"		"	"		(UNIBOON OFF) START LINE 527
313	0606	527	16		"	"		"	"		"	"		"	"		START ROLL 1/6 16
313	0655	527	"		40	4.9		"	"		"	"		"	"		END LINE 527
313	0658	528	"		137	5.4		"	"		"	"		"	"		START LINE 528
313	0717	528	"		"	"		"	"		"	"		"	"		END LINE 528
313	0721	529	"		235	3.4		"	"		"	"		"	"		START LINE 529
313	0800	529	"		235	4.0		"	"		"	"		"	"		K. HILSON ON WATCH
313	0817	529	"		235	4.1		"	"		"	"		"	"		END LINE 529
313	0823	530	"		151	4.9		"	"		"	"		"	"		START LINE 530
313	0843	530	"		150	4.8		"	"		"	"		"	"		END LINE 530
313	0848	531	"		019	3.5		"	"		"	"		"	"		START LINE 531
313	0905	531	"		"	"		"	"		"	"		"	"		END LINE 531
313	0917	532	"		"	"		"	"		"	"		"	"		START LINE 532
313	1007	532	"		"	"		"	"		"	"		"	"		END LINE 532
313	1012	533	"		"	"		"	"		"	"		"	"		START LINE 533
313	1013	533	"		232	4.6		"	"		"	"		"	"		CHANGE RECORDER

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U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP. TYPE UNIBOOMPAGE 15 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NAL 75 1.1

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
312	1020	533	16		234	5.2		400	Y3m		1/4	1/4		1900	800		BELT CHANGED
312	1020	533	16		244	5.6		"	"		"	"		"	"		END OF ROLL 16
312	1121	533	17		227	5.4		"	"		"	"		"	"		ROLL 17 ON
312	1115	533	18		226	5.4		"	"		"	"		"	"		END LINE 533
312	1120	534	18		118	6.2		"	"		"	"		"	"		START LINE 534
312	1158	534	18		144	6.1		"	"		"	"		"	"		END LINE 534
313	1202	535	18		040	4.1		"	"		"	"		"	"		START LINE
313	1351	535	18		"	4.5		"	"		"	"		"	"		END LINE
313	1354	536	18		130	4.1		"	"		"	"		"	"		START LINE
313	1411	536			130	4.1		"	"		"	"		"	"		END LINE
313	1415	537			226	4.4		"	"		"	"		"	"		START LINE
313	1525	537			"	"		"	"		"	"		"	"		END LINE
313	1528	538			345	4.0		"	"		"	"		"	"		START LINE
313	1600	538			345	4.0		"	"		"	"		"	"		HAMPTON ON WATCH.
313	1627	538			345	4.0		"	"		"	"		"	"		UNIBOOM OFF - CHG. BELT
313	1632	538			"	"		"	"		"	"		"	"		UNIBOOM ON
313	1650	538			"	"		"	"		"	"		"	"		END LINE 538

DATE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP. TYPE UNIBOOMPAGE 16 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NAL 75 1.1

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
313	1652	540	18		316	3.9		400	0.3m		1/4	1/4		1900	800		START LINE 540
313	1800	540	18		"	"		"	"		"	"		"	"		DAVIDSON ON WATCH
313	2033	540	18					"	"		"	"		"	"		END ROLL 18
313	2145	540	19		310	5.1		"	"		"	"		"	"		ST ROLL 19
313	2345	540	19		320	5.2		"	"		"	"		1520	850		VALLIER ON WATCH.
314	0106	540	19		"	"		"	"		"	"		"	"		END ROLL 19
314	0144	491	20		—	—		"	"		"	"		"	"		START ROLL 20
314	0106	540	19		—	—		"	"		"	"		"	"		END LINE 540
314	0153	491	20		030	4.0		"	"		"	"		"	"		START LINE 491
314	0322	491	20		"	"		"	"		"	"		"	"		END LINE 491
314	0324	490	20					"	"		"	"		"	"		START LINE 490
314	0353	490	20		081	4.3		"	"		"	"		"	"		END LINE 490
314	0357	487	20					"	"		"	"		"	"		START LINE 487
314	0400	487	20		217	4.7		"	"		"	"		"	"		HAMPTON ON WATCH.
314	0527	487	20		"	"		"	"		"	"		"	"		END LINE 487
314	0537	487	20		"	"		"	"		"	"		"	"		END ROLL 20
314	0544	486	—		"	"		"	"		"	"		"	"		START LINE 486

U.S.G.S. ACOUSTIC EQUIPMENT LOG

EQUIP TYPE UNIBOONPAGE 17 OF 33SHIP LEECHIEF SCIENTIST McCallaghRECORDER TYPE/NO EPGLOCATOR NVAL 75 11
Area Yr ID

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
314	0553	446	21		323	3.9		HULL	0.3m		1/4	1/4		1500	500		START ROLL 21
314	0611	446	21		"	"		"	"		"	"		"	"		END LINE 446
314	0613	483	21		47	3.5		"	"		"	"		"	"		START LINE 483
314	0732	483	21		"	"		"	"		"	"		"	"		END LINE 483
314	0736	482	21		519	3.7		"	"		"	"		"	"		START LINE 482
314	0800	482	21		"	"		"	"		"	"		"	"		KITELSON ON WATCH
314	0759	482	21		"	4.2		"	"		"	"		"	"		END LINE 482
314	0802	479	21		218	"		"	"		"	"		"	"		START LINE 479
314	0905	479	21		218	4.4		"	"		"	"		"	"		END LINE 479
314	0904	479	21		"	"		"	"		"	"		"	"		CHANGE RECORDER BELT
314	0910	478	21		319	4.9		"	"		"	"		"	"		START LINE 478
314	0916	478	21		318	4.6		"	"		"	"		"	"		NEW BELT
314	0926	478	21		"	"		"	"		"	"		"	"		END LINE 478
314	0938	475	21		348	4.5		"	"		"	"		"	"		START LINE 475
314	1015	475	21		"	"		"	"		"	"		"	"		END LINE 475
314	1047	474	21		324	4.5		"	"		"	"		"	"		START LINE 474
314	1059	474	21		"	"		"	"		"	"		"	"		BELT REPAIR

U.S.G.S. ACOUSTIC EQUIPMENT LOG

EQUIP TYPE UNIBOONPAGE 18 OF 33SHIP LEECHIEF SCIENTIST McCallaghRECORDER TYPE/NO EPGLOCATOR NVAL 75 11
Area Yr ID

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
314	1107	471	21		328	4.5		HULL	1/3m		1/4	1/4		1520	250		BELT REPAIRED
314	1117	471	21		327	5.1		"	"		"	"		"	"		END LINE 474
314	1113	471	21		217	3.9		"	"		"	"		"	"		START LINE 471
314	1123	471	21		"	"		"	"		"	"		"	"		END ROLL 21
314	1123	471	22		"	"		"	"		"	"		"	"		START ROLL 22
314	1200	471	22		238	3.9		"	"		"	"		"	"		CARPENTER ON WATCH
314	1228	471	"		230	4.5		"	"		"	"		"	"		END LINE 471
314	1229	470	"		310	4.5		"	"		"	"		"	"		START LINE 470
314	1254	470	"		310	4.5		"	"		"	"		"	"		END LINE 470
314	1254	467	"		034	4.5		"	"		"	"		"	"		START LINE 467
314	1421	467	"		034	4.5		"	"		"	"		"	"		END LINE 467
314	1424	466	"		324	4.5		"	"		"	"		"	"		START LINE 466
314	1444	466	"		324	4.5		"	"		"	"		"	"		END LINE 466
314	1446	465	"		"	"		"	"		"	"		"	"		START LINE 465
314	1443	463	22		"	"		"	"		"	"		"	"		UNIMPTEN ON WATCH END LINE 463
314	1615	462	22		308	3.1		"	"		"	"		"	"		START LINE 462
314	1643	462	22		308	4.0		"	"		"	"		"	"		END LINE 462

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP. TYPE UNIBOOMPAGE 19 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NCAL 75 61

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH		SCALE	RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE		SWEEP	SHOOT	PROGRAM	HIGH	LOW		
314	1646	459	22		042	5.0		HULL	0.3 m	1/4	1/4		1500	900		START LINE 459
314	1656	459	22		"	"		"	"	"	"		"	"		END ROLL 22
314	1709	459	23		"	"		"	"	"	"		"	"		START ROLL 23
314	1816	459	23		"	"		"	"	"	"		"	"		END LINE 459
24	1821	458	23		307	4.6		"	"	"	"		"	"		START LINE 458
314	1849	458	23		"	"		"	"	"	"		"	"		END LINE 458
314	1851	455	23		239	4.5		"	"	"	"		"	"		START LINE 455
314	1954	455	23		"	"		"	"	"	"		"	"		BUBBL ON WATCH
	2019	455	23		"	"		"	"	"	"		"	"		END LINE 455
	2022	454	23		"	"		"	"	"	"		"	"		START LINE 454
	2031	454	23		"	"		"	"	"	"		"	"		END LINE 454
	2054	451	23		045	5.6		"	"	"	"		"	"		START LINE 451
	2156	451	23		"	"		"	"	"	"		"	"		END LINE 451
	2206	450	23		299	4.4		"	"	"	"		"	"		START LINE 450
	2227	450	23		"	"		"	"	"	"		"	"		END LINE 450
	2232	447	23		231	4.3		"	"	"	"		"	"		START LINE 447
	2245	447	23		239	5.2		"	"	"	"		"	"		END ROLL 23

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP. TYPE UNIBOOMPAGE 20 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NCAL 75 61

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH		SCALE	RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE		SWEEP	SHOOT	PROGRAM	HIGH	LOW		
314	2252	447	24		234	5.6		HULL	1/8 m	1/4	1/4		1580	850		START ROLL 24
314	2331	447	24		"	"		"	"	"	"		"	"		END LINE 447
315	0038	446	24		"	"		"	"	"	"		"	"		START LINE 446
315	0105	446			"	"		"	"	"	"		"	"		END LINE 446
315	0107	443			028	2.2		"	"	"	"		"	"		START LINE 443
315	0219	443			"	"		"	"	"	"		"	"		END LINE 443
315	0223	442			"	"		"	"	"	"		"	"		START LINE 442
315	0253	442			"	"		"	"	"	"		"	"		END LINE 442
315	0255	439			245	4.5		"	"	"	"		"	"		START LINE 439
315	0400	439			"	"		"	"	"	"		"	"		UNIBOOM ON WATCH
315	0358	439			"	"		"	"	"	"		"	"		END LINE 439
315	0358	439			"	"		"	"	"	"		"	"		UNIBOOM OFF
315	0412	438	25		310	3		"	"	"	"		"	"		START ROLL 25
315	0417	438	25		"	"		"	"	"	"		"	"		UNIBOOM OFF
315	0424	438	25		"	"		"	"	"	"		"	"		UNIBOOM ON
315	0435	438	25		"	"		"	"	"	"		"	"		END LINE 438
315	0437	435	25		34	3.2		"	"	"	"		"	"		START LINE 435

USGS ACOUSTIC EQUIPMENT LOG

EQUIP TYPE UNIBOOMPAGE 21 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NAL 75 61

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
315	0604	435	25					HULL	0.3M		1/4	1/4		1580	850		END LINE 435
315	0606	434	25		314	3.1		"	"		"	"		"	"		START LINE 434
315	0606	434	25		"	"		"	"		"	"		"	"		CHG UNIBOOM OFF RLT
315	0614	434	25		"	"		"	"		"	"		"	"		UNIBOOM ON
315	0643	434	25		"	"		"	"		"	"		"	"		END LINE 434
315	0646	431	25		230	4.2		"	"		"	"		"	"		START LINE 431
315	0743	431	25		"	"		"	"		"	"		"	"		END LINE 431
315	0745	430	25		312	2.0		"	"		"	"		"	"		START LINE 430
315	0816	430	25					HULL	0.3M		1/4	1/4		1580	850		END LINE 430
315	0819	427	25					"	"		"	"		"	"		ST LINE 427
315	0823	427	25					"	"		"	"		"	"		END OF ROLL 25
315	0831	427	26					"	"		"	"		"	"		ST OF ROLL 26
	0941	427	26					"	"		"	"		"	"		END LINE 427
	0941	426	26		354	3.9		"	"		"	"		"	"		ST LINE 426
	1022	426						"	"		"	"		"	"		END LINE 426
	1029	423			235	3.7		"	"		"	"		"	"		START LINE 423
	1152	423			225	5.6											VALLIER ON WATCH

U.S.G.S ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE UNIBOOMPAGE 22 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NAL 75 61

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
315	1207	423	26					HULL	0.3M		1/4	1/4		1580	850		END LINE 423
315	1208	422	26		318	3.3		"	"		"	"		"	"		Begin Line
315	1210	422	26					"	"		"	"		"	"		CHG ROLL Shut down UNIBOOM
315	1225	422	27		343	3.6		"	"		"	"		"	"		UNIBOOM ON
315	1237	422	27		"	"		"	"		"	"		"	"		END OF LINE 422
315	1238	419	27		038	3.9		"	"		"	"		"	"		Begin Line 419
315	1238	419	"		"	"		"	"		"	"		"	"		Shut down UNIBOOM
315	1242	419	"		"	"		"	"		"	"		"	"		UNIBOOM ON
315	1248	419	"		041	5.2		"	"		"	"		"	"		UNIBOOM OFF - CHG ROLL
"	1300	"	"		"	"		"	"		"	"		"	"		UNIBOOM ON
"	1446	419	"		033	5.1		"	"		"	"		"	"		END LINE 419
"	1449	418	"		353	5.1		"	"		"	"		"	"		Begin Line 418
"	1515	418	"		351	4.7		"	"		"	"		"	"		END LINE 418
"	1517	415	"		217	5.1		"	"		"	"		"	"		Begin Line 415
"	1600	415	"		"	"		"	"		"	"		"	"		UNIBOOM ON WATCH
"	1626	415	"		"	"		"	"		"	"		"	"		END ROLL 27
"	1642	415	28		"	"		"	"		"	"		"	"		START ROLL 28

U.S.G.S ACOUSTIC EQUIPMENT LOG

EQUIP TYPE UNIBOOMDATE 2/75
PAGE 23 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NCAL 75 LI
Area Yr ID

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH		SCALE	RECORDER		PROGRAM	FILTERS		POWER	COMMENTS	
							WATER	SOURCE		RECEIVER	SAFE		SHOOT	HIGH			LOW
315	1745	415	28		-	-		HULL	0.3m		1/4	1/4		150	850		END LINE 415
315	1750	414	28		10	3.3		"	"		1/2	1/2		"	"		START LINE 414
315	1832	414	28		10	3.3		"	"		"	"		"	"		END LINE 414
315	1834	-	-		"	"		"	"		"	"		"	"		UNIBOOM OFF 245. 25
315	1835	411	28		34	3.9		"	"		1/4	1/4		"	"		START LINE 411
315	1844	411	28		"	"		"	"		"	"		"	"		UNIBOOM ON
315	2052	411	28		"	"		"	"		"	"		"	"		END LINE 411
315	2059	410	28		356	4.0		"	"		"	"		"	"		START LINE 410
315	2129	410	28		"	"		"	"		"	"		"	"		END LINE 410
315	2144	407	28		24	5.6		"	"		"	"		"	"		START LINE 407
315	2231	407	28		251	4.2		"	"		"	"		"	"		END ROLL 28
315	2241	407	29		250	4.6		"	"		"	"		"	"		START ROLL 29
315	2331	407	29		"	"		"	"		"	"		"	"		STOP FOR MAINTENANCE
315	2331	407	29		"	"		"	"		"	"		"	"		END LINE 407
315	2331	407	"		"	"		"	"		"	"		"	"		UNIBOOM OFF
315	0000	406	"		"	"		"	"		"	"		"	"		UNIBOOM ON
316	0014	406	"		344	5.1		"	"		"	"		"	"		START LINE 406

DATE 2/75

U.S.G.S ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE UNIBOOMPAGE 24 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NCAL 75 LI
Area Yr ID

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
	0050	406	29		340	5.1		Hull	0.3m		1/4	1/4		1580	850		END LINE 403
316	0032	403	"		034	4.4		"	"		"	"		"	"		Begin LINE 406
316	0256	403	"		047	4.5		"	"		"	"		"	"		END LINE 406
316	0257	402	"		311	4.2		"	"		"	"		"	"		Begin LINE 402
316	0310	402	"		311	4.0		"	"		"	"		"	"		END LINE 402
316	0313	401	"		217	4.5		"	"		"	"		"	"		Begin LINE 401
316	0344	401			"	"		"	"		"	"		"	"		END LINE 401
316	0344	401	29		-	-		"	"		"	"		"	"		Chg. Roll on UNIBOOM
316	0348	552	30		170	5.8		"	"		"	"		"	"		Begin LINE 552
316	0351	552	"		172	5.9		"	"		"	"		"	"		UNIBOOM ON - Roll 30
316	0400	"	"		"	"		"	"		"	"		"	"		HAMPTON ON WATCH
316	0618	552	30		"	"		"	"		"	"		"	"		END LINE 552
316	0619	550	30		182	4.0		"	"		"	"		"	"		START LINE 550
316	0755	550	30		179	3.9		"	"		"	"		"	"		KITTELSON ON WATCH
316	0801	550	30		"	"		"	"		"	"		"	"		END ROLL 30
316	0819	550	31		180	3.6		"	"		"	"		"	"		START ROLL 31
316	0821	550	31		"	"		"	"		"	"		"	"		END LINE 550

USGS ACOUSTIC EQUIPMENT LOG

SHIP LEE

CHIEF SCIENTIST

McCall Nock

EQUIP TYPE UNIBOOM

RECORDER TYPE/NO EPC

LOCATOR

HCAL 75 41

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ULIAN DAY	TIME GMT	LINE #	ROLL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER	COMMENTS	
						WATER	SOURCE	RECEIVER	SCALE	SWEPT	WOST	PROGRAM	HIGH			LOW
316	0826	549	31	121	4.1		HULL	Y3m		1/4	1/4		1580	250	800	START LINE 549
316	0829	549	31	"	"		"	"		"	"		"	"		BELT CINGE
				"	"		"	"		"	"		"	"		
316	0847	549	31	"	"		"	"		"	"		"	"		ENDLINE 549
316	0857	548	31	0	5.9		"	"		"	"		"	"		NEW LINE 548
316	0900	548	31	0	"		"	"		"	"		"	"		BELT REPAIRED
316	0951	548	31	"	"		"	"		"	"		"	"		END LINE 548
316	1002	544	31	141	4.6		"	"		"	"		"	"		START LINE 544
316	1148	544	31	136	4.6		"	"		"	"		"	"		END ROLL 31
316	1154	544	32	135	4.4		"	"		"	"		"	"		Begin Roll 32
316	1326	"	"	143	4.0		"	"		"	"		"	"	600	Change Power from 800 To 600 Joules
316	1500	"	"	"	"		"	"		"	"		"	"	"	UNIFORM ON) WATCH
316	1600	"	"	"	"		"	"		"	"		"	"	"	UNIFORM OFF - END ROLL 32
316	1602	542	E	150	5.8		"	"		"	"		"	"	"	START LINE 542 (UNIFORM OFF)
316	1604	542	33	"	"		"	"		"	"		"	"	"	UNIFORM ON)
316	1604	542	33	"	"		"	"		"	"		"	"	800	CHANGE POWER BACK TO 800 JOULES
316	1719	542	"	"	"		"	"		"	"		"	"	"	UNIFORM OFF - END ROLL 32

316 1723 542 33 150 5.8 HULL 0.3

1905 542

1/4 1/4

Uniboom on
Uniboom off end 542

End 1/4 sec. profiles-Leg 1

Begin 1/4 sec. profiles- Leg 2

U.S.G.S. ACCUSTIC EQUIPMENT LOG.

SHIP . LEE

CHIEF SCIENTIST McCULLOCH

EQUIP TYPE UNITBOOM

RECORDER TYPE/NO EPC

PAGE 26 OF 33
LOCATOR NCAL 75 LI
Area Vc U

[illegible]

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

EQUIP TYPE UniboomPAGE 29 OF 33SHIP LEE

CHIEF SCIENTIST

McCulloch

RECORDER TYPE/NO

EPC

LOCATOR

NAL

Area

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JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
319	2056	16			317	4.3					1/4	1/4		100	100		Start Line 16
	2107	16															end Line 16
	2127	17			228	"					"	"		"	"		Start Line 17
	2135	17															end Line 17
	2200				350	8											proceeding to Line 18
	2219	18			314	4.5					"	"		"	"		Start Line 18
	2251	18															end Line 18
																	uniboom off
320	0025																uniboom on
	0027	19			020						"	"		"	"		Start Line 19
	0036	19															end Line 19
	0108	20									"	"		"	"		Start Line 20
	0120	20															end Line 20
	0132	21									"	"		"	"		Start Line 21
	0208	21															end Line 21
																	uniboom off
	0349																uniboom on

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

EQUIP TYPE UniboomPAGE 30 OF 33SHIP LEE

CHIEF SCIENTIST

McCulloch

RECORDER TYPE/NO

EPC

LOCATOR

NAL

Area

Yr

Li

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JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
320	0410	22									1/4	1/4		100	100		Start Line 22
	0424	22			249	2.7											end Line 22
	0455																uniboom off
	1430				349	8											uniboom on
	1512	24			240	4.5					"	"		"	"		Start Line 24
	1519	24															end Line 24
	1531	23									"	"		"	"		Start Line 23
	1541	23									"	"		"	"		end Line 23
	1600																Secure uniboom
	1810																uniboom on
	1930																uniboom off
	2019																uniboom on
	2142	25															Start Line 25
	2146	25															end Line 25
	2205																uniboom off
	2305																uniboom on
	2307	26			238	4.5					"	"		"	"		Start Line 26

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

EQUIP TYPE UniboomPAGE 31 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NCALArea 75 Tr 41 IL

JULIAN DAY	TIME GMT	LINE #	REEL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW	
320	2315									1/4	1/4		1000	900	end Line 26
321	0000									"	"		"	"	uniboom still on
	0044	27		245	5										Start Line 27
	0047			200											C/C
	0055	27													end Line 27
	0145														uniboom off
	1715						HULL	1/3m	0-183m	"	"		1800	900	uniboom on
	1749	553		007	4.5	45m	"							800J	start Line 553
	1846	553		"	"	"			"						end Line 553
	1849	554		310	"	47m									start Line 554
	1918	554				54m									end Line 554
	1918	555		300		"									start Line 555
	2225	555				51m									end Line 555
	2225	556		317		"							1800	900	start Line 556
	2214	556													end Line 556
	2214	557		325	4.5	67m			"	"	"		1900	800	start Line 557
	2311	557													end Line 557

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

EQUIP TYPE UniboomPAGE 32 OF 33SHIP LEECHIEF SCIENTIST McCullochRECORDER TYPE/NO EPCLOCATOR NCALArea 75 Tr 41 IL

JULIAN DAY	TIME GMT	LINE #	REEL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER	COMMENTS	
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH			LOW
321	2311	557							0-183	1/4	1/4		1900	900	800J	start Line 558
	2315															recorder off
	2324															recorder on
322	0021	558		325	4.5	54m				"	"		"	"		end Line 558
	0021	559		314												start Line 559
	0150	559														end Line 559
	0150	560		330	4.0	49m				"	"		"	"		start Line 560
	0300	560				45m										end Line 560
	0300	561		320		"				"	"		"	"		start Line 561
	0436	561			4.5											end Line 561
	0436	562		315		82m										start Line 562
	0534	562				100m										end Line 562
	0534	563		339		"										start Line 563
	0619	563														end Line 563
	0619	564		315												start Line 564
	0824	564							503-686							uniboom at too deep
	11030					382			274-457							uniboom on

Scientific Log Book

1 sec. sweep (3.5kHz) profiles

DAFE 2/73

EQUIP TYPE Raytheon 3.5 KH EATHY

PAGE 1 OF 40

CHIEF SCIENTIST McCulloch

RECORDER TYPE/NO RAYTHEON 3.5 1-42
UGR/CCS/PTR

LOCATOR NAL 75 L1
Area Yi ID

[illegible]

DAFE 2/75

EQUIP. TYPE 3.5 KHZ BATHY

PAGE 2 OF 40

CHIEF SCIENTIST McCULLOCH

RECORDED TYPE/NO. LIGN / CE 1A

LOCATOR NCAL 75 61
Area Yr ID

[illegible]

U S G S. ACOUSTIC EQUIPMENT LOG.

SHIP LEE

CHIEF SCIENTIST

100 CULLERY

EQUIP TYPE 3.5 KHZ BATTERY

RECORDED TYPE/NO.

1058 1059

LOCATION

КСД

PAGE 3 OF 40
25 41
yr 10

DAFE 2/75

[illegible]

DAFE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEE

CHIEF SCIENTIST

McCulloch

EQUIP. TYPE 3-5 KHZ. BATHY

RECORDED TYPE/NO

LGR / CESP

LOCATOR

NCAL

PAGE 4 OF 40
75 61

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH		
311	0454	460	2						0-810 fm 2 sec			NORM	/	500 W	START 460
	0517	460											/		END 460
	0521	461											/		START 461
	0550	461											/		END 461
	0701	464											/		START 464
	0719	464											/		END 464
	0725	465											/		START 465
	0857	465											/		END 465
	0912	466											/		START 468
	0917	468											/		END 468
	0923	469											/		START 469
	1025	469											/		END 469
	1030	472											/		START 472
	1040	472											/		END 472
	1051	473											/		START 473
	1201	473											/		END 473
	1204	475											/		START 476

U.S.G.S ACOUSTIC EQUIPMENT LOG.

SHIP LEE

CHIEF SCIENTIST McMullen

EQUIP TYPE 3.5 KHZ. BATHY

RECORDER TYPE/NO UCR / 0014

LOCATOR NEAL 75 41
Area Yc 10

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JULIAN DAY	TIME GMT	LINE #	PULL REEL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SLEEP	SHOOT	PROGRAM	HIGH		
311	1226	476	2		4.5				0-800 fm	2 SEC		NORM		500 W	END 476
	1229	477													START 477
	1336	477													END 477
	1337	480													START 480
	1357	480													END 480
	1403	481													START 481
	1515	481													END 481
	1517	484							0-400 fm	1 SEC					START 484; CHANGE SLEEP
	1539	484													END 484
	1545	485													START 485
	1630								200-500 fm						CHANGE SCALE
	1710										TR				CHANGE PROGRAM
	1727	485													END 485
	1721	486													START 486
	1752	488													END 488
	1757	489													START 489
	1805								0-400			NORM			CHANGE SCALE, PROGRAM

DAFE 8/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEE

CHIEF SCIENTIST MC CULLUCH

EQUIP. TYPE 3-5 KHZ BATHY

RECORDED TYPE/NO USA / CCSP

LOCATOR NAL 75 LI
Area Yr ID

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[illegible]

U.S.G.S ACOUSTIC EQUIPMENT LOG:

SHIP LEE

CHIEF SCIENTIST MICHAEL L. LUCH

EQUIP. TYPE 3.5 KHZ BATHYMETRYRECORDED TYPE/NO USA / CESP

LOCATOR HPAL 75 61

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[illegible]

DAFE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEE

CHIEF SCIENTIST M. CULLOCH

EQUIP. TYPE 3.5 KHZ. BATHYMETRY

RECORDED TYPE/NO. UGR/CESP

LOCATOR NCA.L 75 LI

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[illegible]

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP. TYPE 3.5 kHz BATHYMETRYPAGE 15 OF 40SHIP LEECHIEF SCIENTIST McCULLOUGHRECORDER TYPE/NO UGR / CESPLOCATOR NCAL 75 11
Area Yr ID

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH		
015	0100	443	5						0-400	1 sec		TR			500 W	START 443
	0115								0-400			NORM				SCALE CHANGE
	0210	442														END 442
	0223	442														START 442
	0252	442														END 442
	0255	439														START 439
	0340								200-600			TR				CHANGE SCALE
	0358	439														END 439
	0403	438														START 438
	0425	438														END 438
	0437	435														START 435
	0439								0-400			NORM				
	0504	435														END 435
	0606	434														START 434
	0642	434														END 434
	0646	431														START 431
	0743	431														END 431

DATE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP. TYPE 3.5 kHz BATHYMETRYPAGE 16 OF 40SHIP LEECHIEF SCIENTIST McCULLOUGHRECORDER TYPE/NO UGR / CESPLOCATOR NCAL 75 11
Area Yr ID

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH		
315	0745	420	5						0-400	1 sec		NORM			500 W	START 430
	0816	420														END 430
	0818	427														START 427
	0948	427														END 427
	0951	425														START 426
	1022	418														END 426
	1023	423														START 423
		423														END 423
	1208	422														START 422
	1237	422														END 422
	1238	419														START 419
	1445	419														END 419
	1449	418														START 418
	1515	418														END 418
	1517	415														START 415
	1553								200-500			TR				SCALE CHANGE
	1610								0-400			NORM				

Begin 1.0 sec. profiles- Leg 2

DAFE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

SHIP LEE

CHIEF SCIENTIST Mr CULLOCH

EQUIP TYPE 3.5 KHZ BATHYMETRY, UNIBOIM, SIK PAGE 20 OF 40
RECORDER TYPE/NO UGR/CESP LOCATOR NAL 75 41

LOCATOR NCAL 75 41
Area Yr ID

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	m WATER	DEPTH SOURCE RECEIVER	SCALE	RECORDER SWEEP SHOOT	PROGRAM	FILTERS HIGH LOW	POWER	COMMENTS
318	0209	1	7	- 231	4	~30 m	— —	O-400 fms	1 SEC —	NORM	HIGH 12m LOW 370	500 WATT	COMMENCE LINE 1 OF DATA CORE SURVEY
318	0214	1		" "	"	72 m							END LINE 1. STARTING TURN FOR SAMPLING RUN
	0330					93							% OHS. START SAMPLING LUN
	0343					68							STATION A
	0404					60							STATION B
	0407					59							STATION C.
	0410					60							STATION D
	0424					57							STATION E
	0432					57							STATION F
	0434					57							STATION G CORE
	0445					51							STATION H
	0447					51							STATION I CORE
	0459					47							STATION J
	0502					44							STATION K CORE
	0513					42							STATION L CORE
#	0526					38							STATION M CORE
	0539					36							STATION N

USGS ACOUSTIC EQUIPMENT LOG.

SHIP LCR

CHIEF SCIENTIST

M' C 42607

EQUIP TYPE 3.5 KH \pm PISTON, UNPOISON, SILENCER

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RECORDED TYPE/NO

USK / r i p

LOCATOR

NAL 75 LI

Area Yr 10

JULIAN DAY	TIME GMT	LINE #	ROLL #	PREL #	COURSE	SPEED	DEPTH WATER SOURCE RECEIVER	SCALE	RECONDER SWEEP SHOOT PROGRAM	FILTERS HIGH LOW	POWER	COMMENTS
318	0536	1	7	-			36 - -	O-400 fms	1 sec -	NORMAL	- -	500 W STATION O 3.5 LNB
	0538						35					STATION P
	0540						31					STATION Q CORE
	0600	.					39					SECURED FOR NIGHT
	1343	2										TURNER ON 2nd UNIFORM, JULIEN (200m)
	1350				054	4.5		O-400 fms	1 SEC	NORM	UNIFORM 1800 900	START LINE Z
	1407				"	"	.					EAT LINE Z, UNIFORM T. JEFF SCOW OFF
	1410											CIRCLING TO START CORING ON LINE Z
	1421						29					STATION A CORE
	1428						33					STATION B CORE
	1433						33					STATION C CORE
	1439						33					STATION D CORE
	1449						34					STATION E
	1451						34					STATION F
	1452						34					STATION G
	1454						35					STATION H CORE
	1505						47					STATION I

DAFE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEE

CHIEF SCIENTIST

1. n'c u l o c h

EQUIP. TYPE 25 LBS PUMP, (1000000), SIDE/CAV

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RECORDED TYPE/NO

LGR/CEIP

LOCATOR

NCAL 75 LI

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U.S.G.S ACOUSTIC EQUIPMENT LOG.

SHIP LEE

CHIEF SCIENTIST McCulloch

EQUIP TYPE 3.5 KHZ BATHYMETRYRECORDED TYPE/NO UGR / CESP

LOCATOR NCAL 75 41

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[illegible]

DAFE 2/TS

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEF

CHIEF SCIENTIST IRVING CULLOCH

EQUIP TYPE 2.5 1000 1000000000

RECORDED TYPE/NO UGR / CESP

LOCATOR NCA 75 L1

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U.S.G.S. ACOUSTIC EQUIPMENT LOG

EQUIP TYPE 3-5 MHz PARHYMETRY

PAGE 25 OF 40

SHIP LEE

CHIEF SCIENTIST McCULLOUGH

RECORDER TYPE/NO LTR/CCSP

LOCATOR 1101 75 41

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	DEPTH		RECEIVER	RECORDER				FILTERS		POWER	COMMENTS
						WATER	SOURCE		SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
318	150		7	30°	5				0-400	1 SEC		NORM	UNIFORM	180	500 W	PROCEEDING TO LINE 5
																2.5 KHz, UNIFORM (1/4 SEC) SCAN (200 m)
	1000	5		20°	4.5				0-200	1/2 SEC						START LINE
	2000	5		"	"				"	"						END LINE. SECURE UNIFORM AND SCAN.
	2010	1							0-400	1 SEC						TURNING TO BEGIN SAMPLING
	2021					87										STATION A CORE
	2030					90										STATION B
	2032					95										STATION C
	2034					95										STATION D CORE
	2053					77										STATION E
	2058					77										STATION F
	2106					74										STATION G CORE
	2115			215	4.3								UNIFORM	180		PROCEEDING TO LINE 6. 2.5 KHz UNIFORM (1/4 SEC) SCAN (200 m)
	2123	6		300	4.5				0-200 fm	1/2 SEC			"	"		START LINE 6
	2125	6		303	4.5											END LINE 6. PROCEEDING TO LINE 7.
	2133			320	4.5											
	2150	7		074	4.5								UNIFORM	180	500	START LINE 7. 2.5 KHz UNIFORM (1/4 SEC), SCAN (200 m)

NO NAVIGATION

U.S.G.S. ACOUSTIC EQUIPMENT LOG

EQUIP TYPE 3-5 MHz PARHYMETRY

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SHIP LEE

CHIEF SCIENTIST McCULLOUGH

RECORDER TYPE/NO LTR/CCSP

LOCATOR 1101 75 41

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	DEPTH		RECEIVER	RECORDER				FILTERS		POWER	COMMENTS
						WATER	SOURCE		SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
318	2155	7	7	074	4.5				0-200 fm	1/2 SEC		NORM	UNIFORM	180	500 W	LINE 7. 2.5 KHz UNIFORM (1/4 SEC) SCAN (200 m)
	2156	7		"	"				"	"			"	"		END LINE 7. PROCEEDING TO LINE 8.
	2157			323	5.5				0-400	1 SEC						START LINE 8
	2125	8		047	4.5				0-200	1/2 SEC						END LINE 8. SECURE UNIFORM AND SCAN
	2327	8		"	"				"	"						SCALE & SWEEP CHANGE
	2328								0-400	1 SEC						HEADING TOWARD INVERTED BACK TO START OF LINE 8
	2332			007												STILL MANEUVERING NEAR INVERTED BACK
319	0000															
	0036					43										STATION A LINE 8
	0037					42										STATION B
	0039					42										STATION C CORE
	0041					42										STATION D
	0042					44										STATION E CORE
	0053					52										STATION F
	0055					51										STATION G CORE
	0101					53										STATION H CORE
	0106					55										STATION I CORE

NO NAVIGATION

USGS ACOUSTIC EQUIPMENT LOG

SHIP LET.

CHIEF SCIENTIST Mr CHALLON

12/10/1941

RECORDED TYPE/NO 11GR / CC-1-

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LOCATOR

22. 10. 1941

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JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORD				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
210	0112	9	7				5			1 sec			NORM			500W	STATION J
	0114						56										STATION K
	0115						55										STATION L
	0120						60										STATION M
	0122						60										STATION N
	0124						59										STATION O CORE
	0129						60										STATION P
	0130						58										STATION Q CORE
	0135						55										STATION R
	0138						57										STATION S CORE
	0142						58										STATION T CORE
	0148						64										STATION U CORE
	0156						71										STATION V
	0158						73										STATION W CORE
	0205						79										STATION X CORE
	0210				306	4.5											PROCEEDING TOWARDS LINE 9 (SSCAN ON 200M)
	0215														UNIFORM 1800 500		UNIFORM ON - 1/2 SEC

DAFE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEE

CHIEF SCIENTIST W. C. HILL

EQUIP TYPE

3.5 kW. 1000/1500

RECORDED TYPE/NO UGR /CESP

PAGE

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LOCATOR

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U.S.G.S ACOUSTIC EQUIPMENT LOG.

SHIP LEE

CHIEF SCIENTIST W. C. L. G. H.

EQUIP TYPE 3.5 KHZ EARTHMEETERRECORDED TYPE/NO USA / 1000**LOCATION**

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$$\frac{75}{4} \quad \frac{41}{10}$$

JULIAN DAY	TIME GMT	LINE #	PULL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
3/9	0523	9	7				80			6-40 ft	1 SEC		NORM			300 W	STATION N CORE
	0536						91										STATION O CORE
	0538						92										STATION P CORE
	0541						-										SECURED FIL THE NIGHT
3/9	1346				212	6											PROCEEDING TOWARD LINE 10 VARIABLE COURSE & SPEED
	1405	10			214	4.5											START LINE 10. SIDE SCAN SOUNDING 12 SEC
	1425	10			215	4.5								"	"		END LINE 10. MANEUVERING FOR SAMPLING RUN
	1430																REVERSE COURSE TO HEAD BACK UP LINE 10
	1455						76										STATION A
	1457						72										STATION B CORE
	1510						95										STATION C
	1512						96										STATION D
	1521						90										STATION E CORE
	1530	10			213	4.5										UNIBOOM 1800 000	RE-RETURN LINE 10 TO THE SOUTHWEST. UNIFORM 1/4 SEC
	1549	"			"	"								"	"		END RETURN OF LINE 10 SECURE UNIBOOM
	1550																PROCEED TO LINES 12, 13, 14

DAFE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP LEE

CHIEF SCIENTIST McCulloch

EQUIP. TYPE 35 KHZ BATHYMETRY

RECORDER TYPE/NO. UGR/ CESP

LOCATOR

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U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE 3.5 KHZ BATHYMETRYPAGE 31 OF 40SHIP LEECHIEF SCIENTIST McCULLOUGHRECORDER TYPE/NO UGR / CESPLOCATOR NCAL 75 41
Area Yr ID

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
319	1915	13	8				65			0-400 fm	1 sec		NORM			500 W	STATION B
	1916						66										STATION C
	1926						65										STATION D
	1928						65										STATION E
	1936						68										STATION F
	1938						68										STATION G
	1948	14					78										STATION A (LINE
	1950	1					79										STATION B
	2010	15			235	4.5								UNI 1800	300		START LINE 15. UNIFORM (1/4 SEC); SSCAN (200m)
	2033	15			"	"								"	"		END LINE 15.
	2056	16			317	4.3								UNI 1800	300		START LINE 16 UNIFORM (1/4 SEC); SSCAN (200m)
	2109	16			"	"								"	"		END LINE 16
	2110																PROCEED TO LINE 17
	2127	17			228	111											ST. LN. 17
	2137	17															END LINE 17. SECURE UNIFORM + SIDE-SCAN

DATE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

EQUIP TYPE 3.5 KHZ BATHYMETRYPAGE 32 OF 40SHIP LEECHIEF SCIENTIST McCULLOUGHRECORDER TYPE/NO UGR / CESPLOCATOR NCAL 75 41
Area Yr ID

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
319	2140	17	3		49	7				0-400 fm	1 sec		NORM			500 W	PROCEEDING TO LINE 17 CORING STATION
	2152						98										STATION A CORE
	2154						99										STATION B
	2156						98										STATION C CORE
	2200				350	8											PROCEEDING TO LINE 18
	2213	18			314	4.5								UNI 1800	300		START LINE 18. UNIFORM (1/4 SEC) SSCAN 200m
	2251	18			"	"								"	"		END 18. SECURE SSCAN + UNIFORM
	2252																PROCEED TO CORING SITE LINE 18
	2312	18					56										STATION A CORE
	2321	18					54										STATION B
	2323	18					55										STATION C CORE
	2326	18					54										STATION D
	2328	18					53										STATION E CORE
	2340	18					59										STATION F CORE
	2349	18					64										STATION G CORE
320	0022	19			20												END LINE 19. SECURE UNIFORM (1/4 SEC)
	0036																END LINE 19. SECURE UNIFORM + SIDE-SCAN

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

EQUIP. TYPE 35 KH BathyPAGE 33 OF 40SHIP SPATECHIEF SCIENTIST McCullochRECORDER TYPE/NO UGR/CESDLOCATOR NAL 75 L1

DATE 2/75

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
319	0120		8	015	25				0-400m	1 SEC		NOGN	150	150	500W	END LINE 20 TURN TO LOSE SITE
	0208	21														TURN TO LOSE SITE
	0230	"					73									STATION A CORE
	0232	"					72									STATION B CORE
	0241	"					63									STATION C
	0243	"					63									STATION D
	0252	"					54									STATION E
	0254	"					54									STATION F CORE
	0256	"					53									STATION G CORE
	0313	"					66									STATION H CORE
	0315	"					69									STATION I
	0317	"					70									STATION J
	0318	"					71									STATION K CORE
	0320	"					74									STAT L
	0322	"					73									STAT M
	0324	"		283	22											END LINE 21 CORE TO LINE 22
	0400	"														Begin LINE 22

DATE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

EQUIP. TYPE 35 KH BathyPAGE 32 OF 40SHIP SP LeeCHIEF SCIENTIST McCullochRECORDER TYPE/NO UGR/CESDLOCATOR NAL 75 L1

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
320	0424	22	8	269	2.7				0-400m	1 sec		norm	150	150	500W	SSCAN Beam BEGIN TURN
	0430			20	3.1											BACK DOWN LINE 22
	0514						341									STATION A
	0550						338									STATION B
	0624						352									STATION C UNDERBOOM (1/4 SEC) 1/4 SEC: 200m
																SLUICED FOR NIGHT
320	1450			24	3											UNDERWAY FOR SURVEY
	1456			22	4.5											OFF SURVEY LINE APPROXIMATE LINE 24
	1512	24		24	4.5											START LINE 22. UNDERWAY 1/4 SEC: 200m
	1513	24														END LINE 24. CONTINUING TO LINE 23
	1535	23														START LINE 23
	1541	23														END LINE 23. CONTINUING TO LINE 22
	1555				4.4											TURN & BEAM BACK UP LINE
	1600															SECURE UNDERWAY (1/4 SEC) 1/4 SEC: 200m
	1625															END LINE 22. CONTINUING TO LINE 21

U.S.G.S. ACOUSTIC EQUIPMENT LOG

EQUIP TYPE 3.5 KHZ BATHYMETRYPAGE 35 OF 40SHIP LEE CHIEF SCIENTIST A. C. COLLINSRECORDER TYPE/NO. 1000 / 1000LOCATOR NEAL 75 10

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER	COMMENTS
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH		
1730	1742	23	8							0-400	1/SEC		NORM		500 W	ON DECK 500 W LINE 23. WHICH TRAVEL MAKING NEW APPROACH TO RECOVER SITE
	1730				280	34										
	1740				300	2										
	1745															ON STATION. LOWERING DREDGE
	1806				270	4										DREDGE ON DECK. UN- DERWAY. RETURNING SITE
	1902	23					318									DATA CORE STATION A CORE CORES
	1943	23					337									STATION B UNDERWAY FOR LINE 24
	1953				010	4										
	2016	24					146									STATION F
	2030						150									
	2040															STATION C
	2052															STATION D CORE
	2104															STATION E UNDERWAY FOR LINE 25
	2110				010	6										
	2142	25			010	4										START LINE 25. UNIFORM SCAN 200 M.
	2143	25														END 25 SCAN SECTED
	2147															CIRCLING TO BEGIN CORING

U.S.G.S. ACOUSTIC EQUIPMENT LOG

EQUIP TYPE 3.5 KHZ BATHYMETRYPAGE 36 OF 40SHIP LEE CHIEF SCIENTIST A. C. COLLINSRECORDER TYPE/NO. 1000 / 1000LOCATOR NEAL 75 10

JULIAN DAY	TIME GMT	LINE #	ROLL #	REEL #	COURSE	SPEED	DEPTH			RECORDER			FILTERS		POWER	COMMENTS	
							WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH			LOW
320	2200	25	8				53			0-400	1/SEC		NORM			500 W	STATION A CORE
	2210	25					59										STATION B
	2212	25					60										STATION C CORE
	2226	25					38										STATION D
	2227	25					38										STATION E CORE
	2229	25					39										STATION F CORE
	2235				271	6											PROCEEDING TO LINE 26
	2309	26			238	4.5											START LINE 26. UNIFORM 1/4 SEC. SCAN 200 M
	2315	26															END LINE 26.
	2321																CIRCLING JACK TO CORE LINE 26
	2335	26					111										STATION A CORE
	2347	26					103										STATION B
	2349	26					104										STATION C
321	0001	26					97										STATION D CORE
	0005	26					92										STATION E CORE
	0011																PROCEEDING TO LINE 27
	0024	27			285	5											START LINE 27 UNIFORM 1/4 SEC

U.S.G.S. ACOUSTIC EQUIPMENT LOG.

SHIP LEE

CHIEF SCIENTIST M^cULLOCH

EQUIP TYPE 3.5 KHZ CATHYMETR/RECORDED TYPE/NO UGR / CESP

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LOCATOR NCAL 75 LI
Area Yc ID

[illegible]

DAFE 2/75

U.S.G.S. ACOUSTIC EQUIPMENT LOG:

SHIP SP LEE

CHIEF SCIENTIST mcu/bcw

EQUIP. TYPE 3.5 KHZ BJTNY

RECORDED TYPE/NO. UGP/USP

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LOCATOR NW 1 75 22
Area Y. ID

[illegible]

U.S.G.S ACOUSTIC EQUIPMENT LOG

EQUIP. TYPE

3.5 KHZ RTN

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SHIP

SP15

CHIEF SCIENTIST

M. C. M. M.

RECORDER TYPE/NO

151/157

LOCATOR

NCL

75

12

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
322	0545	8				104			0-400	15		NO			50W	
	0600					127										
	0630	564				347										STRIKE LN 564 (0619)
	0645					297										
	0700					329										
	0715					331										
	0730					340										
	0830					619										
	0845					513										
	0900					611										
	0915					651										
	0930					758										
	0945					530										
	1000					533										
	1015					482										
	1030					368										
	1045					210										

DATE 2/75

U.S.G.S ACOUSTIC EQUIPMENT LOG

EQUIP. TYPE

2.5 KHZ

PAGE

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SHIP

Lor

CHIEF SCIENTIST

M. C. M. M.

RECORDER TYPE/NO

151/157

LOCATOR

NCL

75

12

JULIAN DAY	TIME GMT	LINE #	ROLL REEL #	COURSE	SPEED	DEPTH			RECORDER				FILTERS		POWER	COMMENTS
						WATER	SOURCE	RECEIVER	SCALE	SWEEP	SHOOT	PROGRAM	HIGH	LOW		
322	1100	564	9	-		191			0-400	15		NO			50W	
	1115					111										
	1130					79										
	1145					50										
	1151	564														END LINE 564
	1151	565														ST LN 565
	1200					61m										
	1215					76										
	1230					108										
	1245					258										
	1300					400										
	1315					513										
	1330					620										
	1345					758										
	1400					839										
	1415					902										
	1430															END LEG II
	1445															END ROLL 8

End 1.0 sec. profiles- Leg 2