MDIG 1/77

U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ~~Side-Scan Sonar~~ ORE BOOMER PAGE 1 OF 14

LOCATOR D81 - 85 - AR (COL. 73-80) (ID. - YR. - AREA)

TOW DIST./DEPTH: SOURCE SLED RECEIVER Benthos -30 elc SHIP DISCOVERER

RECORDER TYPE/NO. EPC 3200 S/#523 CHIEF SCIENTIST P. Barnes / L. Phillips

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT	MEDIA/SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. 5 LET/NO. *	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	S/E OF ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE	SPEED	WATER DEPTH	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER J
	251	0200		3		PAP	UNIB	1	X		X		SOL 3 (TESTING EQP.)	038	3.5	110	0-0.25 sec	1/4	1/4	1500	300	175J
	251	0248		3		PAP	UNIB	1			X		COURSE CHANGE TO 048 DUE TO EXCESSIVE CURRENT DRIFT	048	3.5	136						
	251	0305		3		PAP	UNIB	1					COURSE CHANGE	035	3.9							
	251	0328		3				1				X	OFF FOR REPAIRS									
	251	0413		3				1			X		Sys. up				0-.5"	1/2"	1/2"	5k	700	175
	251	0457		3				1					Change Filters				0-.5"	1/2"	1/2"	2k	600	
	251	0529		3				1		X		X	Change Recorder, EOR 1									
	251	0545		3				2	X		X		EPC 4100 New Recorder #234 SOR 2				0-.5"	1/2	1/2	2k	600	175
	251	0615		3				2				X	EOL 3, SYS off				0-.5"	1/2	1/2	2k	600	175
	252	2100		0.1.0				2	X				SOR 2									
	253	0200		0.1.1				2		X			EOR 2									
	253	1011		0.1.2				3	X				SOR 3									
	253	2353		0.1.3				3		X			EOR 3									
								4	X				SOR 4				0-.25	1/4	1/4	2k	300	175
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

* PLEASE RIGHT-JUSTIFY THESE ENTRIES

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MDIG 1/77

U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 21 EQUIP. TYPE ORE Hi. Res. seismic GEOPULSE CATAMARAN PAGE 2 OF 14

LOCATOR D1 (ID.) - 85 (YR.) - AR (AREA) (COL. 73-80)

TOW DIST./DEPTH: SOURCE GEOPULSE RECEIVER BENTHOS 30 ELEMENT SHIP DISCOVERER

RECORDER TYPE/NO. EPC 3200 CHIEF SCIENTIST BARNES

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT *	MEDIA/ SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. 5 LET/NO. *	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	S/E OF ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE OT	SPEED kts	WATER DEPTH m	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER
	252	2100		010		PAP	UNIB	2	X				SOR 2	000	4.4	27						
	252	2247		010		PAP	UNIB	2				X	Trigger Problems									
	252	2251		010		PAP	UNIB	2			X		Corrected									
	252	2330		010		PAP	UNIB	2					End of Line 010	092	4.4	42						175
	252	2330		011		PAP	UNIB	2					start of Line 011	155	4.4	48						175
	253	0200		011		PAP	UNIB	2		X			EOR 2, EOL 011	250	4.8	28						
	253	1011		012		PAP	UNIB	3	X				SOR 3	285	4.5	36						175
	253	1345		012		PAP	UNIB	3					End of Line 012	305	4.2	28						
	253	1350		013		PAP	UNIB	3					start of Line 013	210	4.2	28						
	253	1600		013		PAP	UNIB	3					End of Line 013	205	4.8	18						
	253	1610		014		PAP	UNIB	3					start of Line 014	291	4.5	17						
	253	1715		014		PAP	UNIB	3				X	End of Line 14	291	4.5	16						
	253	2255		015		PAP	UNIB	3			X		start of Line 15	026	4.5	16.5	0-.25	1/4	1/4			175
	253	2353		015		PAP	UNIB	3		X			EOR 3, EOL 15	025	4.5	21						
	254	0215		016		PAP	UNIB	4	X				SOR 4, SOL 16	035	4.5	20.5	0-.25	1/4	1/4			175
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

* PLEASE RIGHT-JUSTIFY THESE ENTRIES

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MDIG 1/77

U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE HI. RES. SEISMIC PAGE 3 OF 14

LOCATOR D1 (ID.) - 85 (YR.) - AR (AREA) (COL. 73-80)

TOW DIST./DEPTH: SOURCE GEOPULSE RECEIVER BENTHOS 30 ELEMENT SHIP DISCOVERER

RECORDER TYPE/NO. EPC 3200 CHIEF SCIENTIST P. BARNES

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. *	STA. NO. OR SHOT POINT	MEDIA/ SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. 5 LET/NO.	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	S/E OF ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE	SPEED	WATER DEPTH m	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER
	254	0845		16 **		PAP	UNIB	4 *					ROUTINE, OPERATING	035°	4.5	126	0-.25 s.	1/4	1/4	300	10000	175
	254	0915		16		PAP	UNIB	4					change scale ("a delayed by b")			149	.125-.375	1/4	3/8			
	254	0938		16		PAP	UNIB	4				X	RECORDER OFF	024	3k	147						
	255	0700		TRAN									streamer and geopulse "H2O	var	var							
	255	0702		TRAN 18							X		SOL 18 system on	var	var	120		1				
	255	0																				
	255	0807		18								X	Geopulse down					1/4				
	255	0904		18				4		X		X	END OF ROLL 4, START R. #5	040	4	128						
	255	0913		18				5	X		X		RECORDER ON, S.O.R #5	~~040~~	4	140						
	255	0915		18				5				X	High voltage pwr problem				no data					
	255	0940		18		PAP	UNIB	5			X		restart	110	4	131	.125-.375 sec	1/4	3/8	300	10K	175
	255	0955		18				5					remove delay	110	4		0-1/4 sec	1/4	1/4	300	10K	175
	255	1330		18		"	"	5				X	DOWN FOR REPAIR	125	4	29	"	"	"	"	"	"
	256	0245		20		PAP	UNIB	5			X		Start system (on line 20)	330	4	135	"	"	"	"	"	"
	256	0616		20				5		X			EOR #5	330	4.5	122		"	"	2000	500	
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE HI RES. SEISMIC PAGE 4 OF 14

LOCATOR D1 (ID.) - 85 (YR.) - AR (AREA) (COL. 73-80)

TOW DIST./DEPTH: SOURCE Geopulse RECEIVER Benthos 30 Element SHIP R/V Discoverer

RECORDER TYPE/NO. EPC 3200 CHIEF SCIENTIST P. Barnes

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT	MEDIA/ SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. 5 LET/NO. *	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	S/E OF ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE	SPEED	WATER DEPTH m	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER
	256	0626		20		PAP	UNIB	6	X				SOR #6	350	4.5	132				2000	500	
	256	0629		20		PAP	UNIB	6					change fire to .375					1/4	.375	2000	500	
	256	0715		20				6				X	EOL 20 sys off	040	4.5	165						
	256	1008		20				6			X		SLED IN WATER, RECORDER ON	260	4	308						
	~~256~~	~~1015~~		~~21~~																		
	256	1145		21		PAP	UNIB	6					change delay	260	4	205	.125-.375 sec	1/4	3/8	2000	500	EGG
	256	1314		21		"	"	6					c/s (no delay)	270	4	114	0-0.25"	1/4	1/4	2000	500	
	256	1400		21				6				X	EQUIP. OFF	267	4	105.5						
	~~256~~	~~1400~~		~~21~~				~~6~~														
	256	2125		22		PAP	UNIB	6			X		sled in water, recorder on SOL 22	105	4.5	48m	0-0.25"	1/4	1/4	2000	500	EGG
	257	0125		22		"	"	6			X		ADJUSTED THRESHOLD	240	4.5	41m	"	"	"	"	"	100 Joule
	257	0300		22		"	"	6		X		X	EOR 6	250	3	30	"	"	"	"	"	"
	257	0310		22		"	"	7	X		X		SOR 7	"	"	"	"	"	"	"	"	"
	257	03		22		"	"	7														
	257	0703		22				7					EOL 22	340	4.5	58						
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE Hi Res Seismic PAGE 5 OF 14

LOCATOR D1 (ID.) - 85 (YR.) - AR (AREA) (COL. 73-80)

TOW DIST./DEPTH: SOURCE Geopulse RECEIVER Benthos 30 Element SHIP R/V Discoverer

RECORDER TYPE/NO. EPC 3200 CHIEF SCIENTIST P. Barnes

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. * **	STA. NO. OR SHOT POINT	MEDIA/SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. 5 LET/NO. *	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	END	DATA/SYST RECORDING ON	OFF	COMMENTS	COURSE	SPEED	WATER DEPTH m	RECORDER SCALE	SWEEP	SHOOT	FILTERS HIGH	LOW	POWER J
	257	07.07		23		PAP	UNIB	7					SOL 23	018	4.5	58	0.-0.25"	1/4	1/4	2000	500	100
	~~257~~	~~11.08~~		~~23~~		~~PAP~~	~~UNIB~~	~~7~~					DELAY .2	018	4.5			~~1/4~~	~~1/4~~			
	257	12.25		23		PAP	UNIB			X			E.O.R #7									
	257	12.28		23		PAP	UNIB		X				S.O.R #8									
	257	14.00		25		"	"	8				X	system off	201	4.5	53	"	"	"	"	"	"
	258	07.10		026		PAP	UNIB	8			X		sys. on SOL 26	250	4.5	~100	0-.25	1/4	1/4	500 8	2k	100
	258	12.18		27		"	"	8			~~X~~	X	SHUT OFF BOOMER TO UNTANGLE SSS FISH	340	4.5	102						
	258	12.24		27		"	"	8			X		SYSTEM ON	"	"	"						
	258	12.36		27		"	"	8			X		REMOVED DELAY: 1/4" SWEEP & PULLED IN HYDROPHONE A BIT TO ADJUST RECORD QUALITY	328	4.5	102	0-1/4"	1/4	1/4	2K	500	100
	258	12.46		27		"	"	8			X											
	258	13.03		27		"	"	8					BOOMER OFF DUE TO ICE CHUNKS									
	258	13.10		27		"	"	8					BOOMER ON	321	3.6	94	0-1/4	1/4	1/4	2k	500	100
	258	16.48	45	27		"	"	8		X			eor 8	335	4.0	~~80~~ 5						
	258	16.48	45	27		"	"	8				X	sys. off	335	4.0	80.0						
	258	16.54		27		"	"	9			X		sys. on	335	4.0	82.5						
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE High Res Seismic PAGE 6 OF 14

LOCATOR D1 (ID.) – 85 (YR.) – AR (AREA) (COL. 73-80)

TOW DIST./DEPTH: SOURCE geopulse RECEIVER Benthos 30 element SHIP R/V Discoverer

RECORDER TYPE/NO. EPC 3200 CHIEF SCIENTIST P. Barnes

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT	MEDIA/ SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. 5 LET/NO. *	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	S/E OF ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE	SPEED	WATER DEPTH m	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER dB
	258	1654	4.0	27		PAP	UNIB	9	X				start of roll 9	335	4.0	82.5	0-.25	1/4	1/4	2k	500	100
	258	1745		27		"	"	9				X	Sys. off eol 27	300	3.7	122.5	"					
	260	1245		30		"	"	9			X		SYS. ON, LINE 30 IN PROGRESS	250	4.5	43	0-.25	1/4	1/4	2K	500	100
	260	1600		30		"	"	9				X	SYS. off; EOL 30	255	5	40	"	"	"	"	"	"
	261	0300		31		"	"	9			X		SOL 31	215	4.4	42	"	"	"	"	"	"
	261	0448		31		"	"	9					SOL 31	240	4.5	37.5	"					
	261	0448		32		"	"	9					SOL 32	276	4.5	37.5	"					
	261	0658		32		PAP	UNIB	9		X		X	EOR 9	276	4.5	39.5	"	"	"	"	"	"
	261	0702		32		PAP	UNIB	10	X		X		SOR 10	276	4.5	39.5						
	261	0740		32		PAP	UNIB	10					Speed change	276	5.0	40						
	261	1151		33		"	"	10				X	OFF TO CHECK INTERFERENCE	306	5.0							
	261	1155		33		"	"	10			X		Restart	306	5.0							
	261	1530		33		"	"	10		X			EOR 10	"	"	41						
	261	1536		33		"	"	11	X				SOR 11	"	"	41						
	261	1600		33		"	"	11					EOL 33	306	4.5	42						
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE High Res. Seismic PAGE 7 OF 14

TOW DIST./DEPTH: SOURCE geopulse RECEIVER Benthos 30 element SHIP Discoverer

LOCATOR D1 - 85 - AR (COL. 73-80) ID. YR. AREA

RECORDER TYPE/NO. EPC 3200 CHIEF SCIENTIST Phillips / Barnes

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT	MEDIA/SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. 5 LET/NO. *	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	END	DATA/SYST RECORDING ON	OFF	COMMENTS	COURSE	SPEED	WATER DEPTH m	RECORDER SCALE	SWEEP	SHOOT	FILTERS HIGH	LOW	POWER
	261	1600		34		PAP	UNIB	11					SOL 34	350	4.5	42	0-.25					
	261	2041		34		PAP	UNIB	11				X	Sys OFF TO CHANGE BELT	348	4.5	47	0-.25					
	261	2046		34		PAP	UNIB	11			X		Sys ON	348	4.5	47	0-.25					
	261	2109		34		PAP	UNIB	11				X	EOL - STA 26		0	42.5						
	261	2216		35		PAP	UNIB	11					SOL 35	348	4.5	43						
	261	2311		~~35~~	27	PAP	UNIB	11				X	STATION 27		0	42						
	262	0023		35		"	"	11			X		CONTINUATION OF LINE 35	000		42						
	262	0213		35		"	"	11		X		X	SYSTEM OFF TO CHANGE PAPER	010	4.6	43						
	262	0217		35		"	"	12	X		X		SYSTEM UP	010	4.6	43						
	262	1034		36		"	"	12		X			End roll 12	149	5.0	42	0-.25 sec					
	262	1041		36		"	"	13	X				Start roll 13	149	5.0	42	0-.25 sec			2k	500	
	262	1830		37		"	"	13				X	EOL 37 sta 28	284	4.5	44	0-.25 sec					
	262	2007		38		"	"	13			X		on line 38	279	4.5	45	0-.25 sec			2k	500	
	262	2035		38		"	"	13		X			E.O.R. [redacted] 13	279	4.5	46	0-.25 sec			2k	500	
	262	2040		38		"	"	14	X				S.O.R [redacted] 14	279	4.5	46	0-.25 sec			2k	500	
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE High Resol Seismic PAGE 8 OF 14

LOCATOR D1 (ID.) - 85 (YR.) - AR (AREA) (COL. 73-80)

TOW DIST./DEPTH: SOURCE SLED RECEIVER 30-element Benthos SHIP DISCOVERER

RECORDER TYPE/NO. EPC 3200 CHIEF SCIENTIST PHILLIPS/BARNES

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT	MEDIA/ SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. * 5 LET/NO.	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	S/E OF ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE	SPEED	WATER DEPTH	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER
	262	2130		~~2~~	29	PAP	UNIB	14				X	Arr on Sta 29		0	46.5						
	262	2245		38		PAP	UNIB	14			X		SLED BECK IN WATER with	286 268		46.5	0-¼ sec	¼ sec	¼ sec	2000 500 500 ~~2000~~		Lots
		2245											ORE Geopulse Pwr Unit									
	262	2315		38		PAP	UNIB	14				X	no pops ? pwr unit fail?									
	262	2330		38		PAP	UNIB	14			X		restore ops: EGG pwrd			47						
	263	0225		38	30	"	"	14				X	SYSTEM OFF FOR CORING STA 30	270	4.5	49						
	263	0359		38		"	"	14			X		station Sys on cont line 38	255	4.0	49	0-.25	¼	¼	2000 500	500 2000	
	263	0700		STAT	31	"	"	14				X	sys off sta. 31	—	—	51						
	263	0723		~~STAT~~ 39	31	"	"	14			X		sys on leave sta. 31	140	4.0	51						
	263	0725		39		"	"	14					sol 39	140	4.5	51						
	263	0818		39		PAP	UNIB	14		X			end roll 14	140	4.5	51	0.25	¼	¼	2k	500	
	263	0831		39		"	"	15	X				start roll 15	140	4.5		"	"	"	"	"	
	263	1625		40		"	"	15					eol 40	235	4.5	55	"	"	"	"	"	
	263	1623		41				15					sol 41	90	4.5	55	"	"	"	"	"	
	263	1700		41		"	"	15		X			eol 41, EOR 15	90	4.5	52.5	"	"	"	"	"	
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE High Res. Seismic PAGE 9 OF 14

LOCATOR D1 (ID.) - 85 (YR.) - AK (AREA) (COL. 73-80)

TOW DIST./DEPTH: SOURCE geopulse RECEIVER 30 element Benthos SHIP Discoverer

RECORDER TYPE/NO. EPC 3200 CHIEF SCIENTIST L. Phillips/P. Barnes

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT	MEDIA/SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. 5 LET/NO. *	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	S/E OF ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE	SPEED	WATER DEPTH m	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER
	268	0739		TRAN		PAP	UNIB	1.6	X		■		sys on, SOR 16	295	4.5	27	0-.25	.25	.25	2000	500	
	268	0743		43		"	"	1.6	■				201 43	295	4.5	20	"	"	"	"	"	
	268	1110		44		"	"	1.6					BOOMER SLED TETHER SHORTENED	165	4.5	39	0-.25 sec	1/4	1/4	500 ←	2000	
	268	1600	00	45				1.6		X			EOR 16	052	4.5	33						
	268	1610	30	45				1.7■	X				SOR ■17	055	4.5	83						
	268	1630		045		PAP	UNIB	1.7				X	End of line 045	055	4.5	35	0-.25 sec	1/4	1/4	2k ■	500 ■	
	~~269~~	~~0251~~	~~45~~		~~39~~																	
	269	0655		46		"	"	1.7			X		sys on SOL 46	320	4.5	57	"	"	"	"	"	
	269	1016		46		PAP	UNIB	1.7				X	CHANGE STYLUS BELT	320	4.5	52.5	"	"	"	"	"	
	269	1023		46		PAP	UNIB	1.7			X		Sys. ON									
	269	1520		46		"	"	1.7		X			EOR 17	265	4.0	48	"	"	"	"	"	
	269	1532		46		"	"	1.8	X				SOR 18	"	"	48	"	"	"	"	"	
	269	1700		46		"	"	1.8				X	EOL 46/sys off	265	4.5	48.5	"	"	"	"	"	
	269	1856		047		PAP	UNIB	1.8			X		SOL 47/sys on									
	269	2117		47		"	"	1.8					ET FW Hydrophone.	280	4.5	50.5	"	"	"	"	"	
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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MDIG 1/77

U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE Boomer ~~sled~~ PAGE 10 OF 14

LOCATOR D1 (ID.) - 85 (YR.) - AR (AREA) (COL. 73-80)

TOW DIST./DEPTH: SOURCE SLED RECEIVER STREAMER SHIP DISCOVERER

RECORDER TYPE/NO. EPC 3200 CHIEF SCIENTIST PHILLIPS/BARNES

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT	MEDIA/SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. * 5 LET/NO.	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	S/E OF ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE	SPEED	WATER DEPTH	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER
	269	2125		47		PAP	UNIB	18					operating Innerspace hydrophone	280	4.5	51	0-.25					
	269	2134		47		PAP	UNIB	18					BACK TO BENTHOS 30 element PHONE	280	4.5	51	"					
	269	2200		47		PAP	UNIB	18				X	E.O.L 47	280	4.5	44	"					
	269	2240		48		"	"	18			X		SOL 48	350	4.5	48	"					
	270	0220		48		"	"	18		X		X	EOR 18	~~236~~	4	44	"					
	270	0227		48		"	"	19	X		X		SOR 19	236	4	44	"					
	270	0408		49		"	"	19				X	EOL 49	092	4.5	45.5	"					
	270	1005		50		"	"	19			X		S.O.L 50	184	4.5	46	0-.25					
	270	1645		50		PAP	UNIB	19		X			C/filters (?) EOR 19	128	4.3	51.5	0-.25	1/4	1/4	2000	650	
	270	1656	30	50		"	"	20	X				SOR 20	128	4.5	48.5	"	"	"	"	"	
	270	1815		50		"	"	20					take-up difficulties	128	4.5	46.5	"	"	"	"	"	
	270	1822		50		"	"	20					C/filters 500-2000	130	4.3	47	"	"	"	"	500	
	~~270~~ 270 ~~2030~~	2038		50		PAP	UNIB	20				X	SLED on BOARD	130	4.5	48						
	270	2045		50				20		X			~~EOL~~ 50 End ROLL 20									
	271	1100		51				21	X		~~X~~		SOR 21 ~~SOL 51~~		4.5	42						
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE Boomer PAGE 11 OF 14

LOCATOR D1 (ID.) - 85 (YR.) - AR (AREA) (COL. 73-80)

TOW DIST./DEPTH: SOURCE Sled RECEIVER Streamer SHIP DISCOVERER

RECORDER TYPE/NO.: EPC 3200 CHIEF SCIENTIST PHILLIPS / BARNES

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT	MEDIA/ SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. * 5 LET/NO.	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	S/E OF ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE	SPEED	WATER DEPTH	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER
	271	1102		51		PAP	UNIB	21				X	SOL 51	239°	4.5	425	0-1/4 sec	1/4				
	271	1515		51		"	"	21		X		X	EOR 21	220	4.8	33	"	"				
	271	1522		51				22	X		X		SOR 22 CHANGED STYLUS BELT	220	4.8	33	"	1				
	271	1610											C/Filters							2.2k	500	
	271	2155		51		PAP	UNIB					X	OFF EOL 51	220	4.5	25	0-1/4			2K	320	
	272	0300		52		"	"	22	X		X		SOL 52	320	4.6	42	0-0.25"	1/4"	1/4"	2k	500	
	272	0320		52		"	"	22				X	Power Supply down	"	"	"	"	"	"	"	"	
	272	0329		52		"	"	22			X		System Up	"	"	"	"	"	"	"	"	
	272	0431		52		"	"	22		X		X	SOR 22	328	4.6	42	"	"	"	"	"	
	272	0449		52		"	"	23	X				SOR 23									
	272	1307		53		"	"	23		X			EOR 23	230	5	46	"	"	"	"	"	
	272	1312		53		"	"	24	X				SOR 24	"	"	"	"	"	"	"	"	
	272	1432		53		"	"	24				X	change stylus	230	5	45	"	"	"	"	"	
	272	1434		53		"	"	24			X		system up	"	"	"	"	"	"	"	"	
	272	1745		53		PAP	UNIB	24				X	EOL #53	230	5.0	32	"	"	"	"	"	
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE Boomer PAGE 12 OF 14

TOW DIST./DEPTH: SOURCE Sled RECEIVER Streamer SHIP DISCOVERER

LOCATOR D1 - 85 - AR (COL. 73-80) (ID. - YR. - AREA)

RECORDER TYPE/NO. EPC 3200 CHIEF SCIENTIST PHILLIPS / BARNES

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT	MEDIA/ SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. * 5 LET/NO.	'X' IN ONE BOX ONLY S/E ROLL, REEL STRT	S/E ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE	SPEED	WATER DEPTH	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER
	273	0545		54		PAP	UNIB	24			X		SOL #54	210	4.5	48	0-1/4 sec 0-187.5	1/4	1/4	500	2000	
	273	0935		54		PAP	UNIB	24		X			E.O.R 24	210	4.5	44.5	0-1/4 SEC	1/4	1/4	500	2000	
	273	0938 ~~0935~~		54		PAP	UNIB	25	X				S.O.R 25					"	"	2000	500	
	~~273~~	~~0935~~		~~54~~		~~PAP~~	~~UNIB~~	~~25~~										"	"	"	"	
	273	1325		54		PAP	UNIB	25					SOL #54	205	4.5	47	0-.25"	"	"	"	"	
	273	1330		55		PAP	UNIB	25					SOL #55	290	4.5	47	0-.25"	"	"	"	"	
	273	1700		55		PAP	UNIB	25					SOL #55	025	4.5	42.5	0-.25"	"	"	"	"	
	274	0850		56		PAP	UNIB	25			X		SOL #56	025	4.5	43.5	0-.25"	1/4"	1/4"	2K	500	
	274	0951		56		PAP	UNIB	25		X			End roll 25	025	4.5	43.5	0-.25 sec	1/4	1/4	2k	500	
	274	0957		56		PAP	UNIB	26	X				start roll 26	025	4.5	43.5	0-.25 s	1/4	1/4	2k	500	
	274	1330		57		PAP	UNIB	26					EOL #56 SOL #57	280	4.5	46	0-.25	"	"	"	"	
	274	1645		57		PAP	UNIB	26				X	EOL 57	203	4.5	46.5	0-.25	1/4	1/4	2k	500	
	274	1645		57		PAP	UNIB	26		X			END ROLL 26	203	4.5	46.5	0-.25	1/4	1/4	2K	500	100 J
	275	0~~7~~05		TRAN		PAP	UNIB	27	X				Sys. on SOR #27 SOL #58 0800	200	4.5	46.5	0-.25	"	"	"	"	"
	275	1645		059		PAP	UNIB	27		X			eor #27	320	4.5	56.5	0-.25	"	"	"	"	"
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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U.S.G.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE High res. seismic uniboom PAGE 13 OF 14

TOW DIST./DEPTH: SOURCE geopulse RECEIVER 30 element Benthos SHIP R/V Discoverer

LOCATOR 81 D1 - 85 - AR (COL. 73-80) (ID. - YR. - AREA)

RECORDER TYPE/NO. EPC 3200 S #524 CHIEF SCIENTIST Phillips / Barnes

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT	MEDIA/ SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. * 5 LET/NO.	'X' IN ONE BOX ONLY S/E ROLL, REEL STRT	S/E ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE	SPEED	WATER DEPTH	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER
	275	1656		059		PAP	UNIB	28	X				SOL #28	320	4.5	56.5	0-0.25"	1/4"	1/4"	2K	500	100J
	~~276~~	~~1140~~		~~60~~		"	"	~~28~~														
	275	2035		59		"	"	28				X	EOL 59									
	276	1140		60		PAP	UNIB	28			X		near SOL 60	119°	4.5	47	"	"	"	"	"	"
	276	1157		60		"	"	28				X	change stylus belt	119	4.5	47	"	"	"	"	"	"
	276	1202		60		"	"	28			X			119	4.5	47	"	"	"	"	"	"
	276	1645		60				28		X			EOL #28	110	4.5							
	276	1653		60				29	X				SOL #29	110	4.5							
	276	1920		060		PAP	UNIB	29				X	Belt Change				0-0.25"	1/4"	1/4"	1.6K	400	
	276	1922	40	060		PAP	UNIB	29			X		C/Filters				"	"	"	2K	300	
	276	2130		60		"	"	29				X	End line 60	125	4.5	37.5	"	"	"	"	"	
	277	0713		61		PAP	UNIB	29			X		Sys on SOL #61	310	4.5	30.5	"	"	"	"	"	
	277	0755		61		PAP	UNIB	29				X	CHANGE STYLUS BELT	310	4.5	30.5	0-0.25"	1/4"	1/4"	2K	300	
	277	0757		61		PAP	UNIB	29			X											
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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U.S. ACOUSTIC EQUIPMENT LOG

LEG 1 EQUIP. TYPE ORE High Resolution Seismic Boomer PAGE 14 OF 14

LOCATOR D1 (ID.) – 85 (YR.) – AR (AREA) (COL. 73-80)

TOW DIST./DEPTH: SOURCE SLED RECEIVER STREAMER SHIP DISCOVERER

RECORDER TYPE/NO. EPC 3200 S CHIEF SCIENTIST PHILLIPS / BARNES

PUNCH FLAG	TIME & POSITION * JULIAN DAY	GMT HR.-MIN.	GMT SEC.	LINE NO. **	STA. NO. OR SHOT POINT	MEDIA/SPEC. CODE 3 LETT'S	ARCHIVE NO. DATA/EQUIP. CODE 4 LETTERS	ARCHIVE NO. ROLL, REEL OR SEQUENCE NO. 5 LET/NO. *	'X' IN ONE BOX ONLY S/E OF ROLL, REEL STRT	S/E OF ROLL, REEL END	DATA/SYST RECORDING ON	DATA/SYST RECORDING OFF	COMMENTS	COURSE	SPEED	WATER DEPTH	RECORDER SCALE	RECORDER SWEEP	RECORDER SHOOT	FILTERS HIGH	FILTERS LOW	POWER joules
	277	0805		61		PAP	UNIB	29				X	ET at work	310	4.5							
	277	0811		61		"	"	29			X		fixed									
	277	0819		61		"	"	29				X	ET at work									
	277	0820		61		"	"	29			X		fixed	310	4.5		0-1/4 sec	1/4	1/4	500	2000	
	277	1115		62		"	"	29		X			end roll 29	270	4.5		"	"	"	"	"	
	277	1121		62		"	"	30	X				START ROLL 30	"	"	41	"	"	"	"	"	
	277	1630		062		PAP	UNIB	30				X	End of Line 062				0-1/4 sec	1/4	1/4	500	2k	100
	278	0837		63		PAP	UNIB	30			X		SOL 63	290	4.5	29.5	0-1/4 sec	1/4	1/4	500	2k	100
	278	1002	40	63		"	"	30					paper speed to 150 lines/inch from 200 lines/inch									
	278	1215		63		"	"	30		X			EOR 30	276	4.5	41	"	"	"	"	"	"
	278	1223		63		"	"	31	X				SOR 31	276	4.5	41	"	"	"	"	"	"
	278	1230		63		"	"	31				X	Down for Fix-up	276	4.5	41	"	"	"	"	"	"
	278	1233		63				31			X		Fixed & Back up	276	4.5	41	"	"	"	"	"	"
	278	1700		63		PAP	UNIB	31				X	EOL # 63									
	278	1700		63		"	"	31		X			EOR # [redacted] 31 (LAST ROLL)									
	1-3	5-8	9, 10	12-15	16-19	21-23	25-28	29-33	37	38	39	40										

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packed away and off forever