U.S. GEOLOGICAL SURVEY

DFS V LOG

VESSEL BALkash CRUISE NO. BAIK-92-2 DATE 9-15-92

SHOT INTERVAL (DISTANCE) _____ m OR TIME 24 sec.

OFFSET 400 m PRIME NAVIGATION GPS

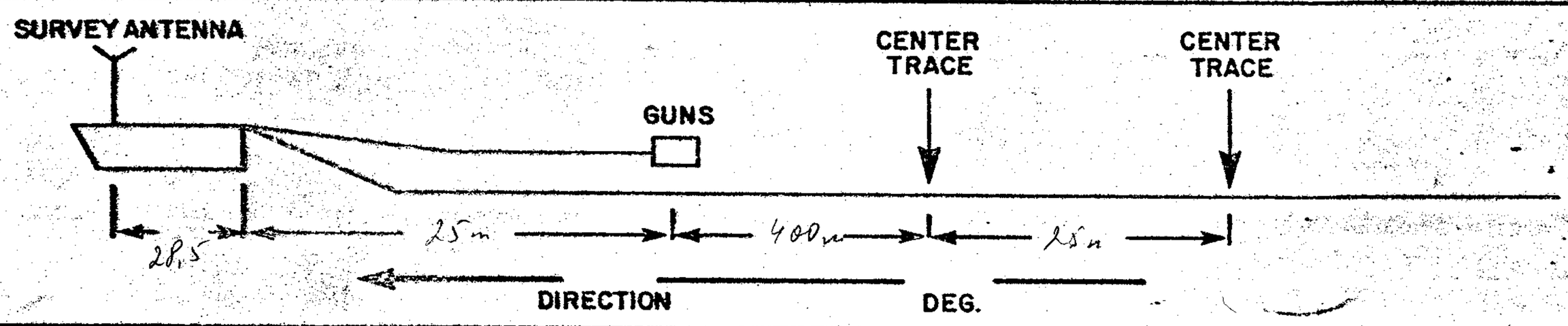
LINE NO. 17 DIR. ____ DEG. CABLE TYPE 96

LOCATION Baikal Central Basin TRACE INT. 25

SAMPLE RATE 4 MS. BPI 1600 SEG B FORMAT ____

RECORD LENGTH 9 sec. EXTENDED HEADER START WORD ____

SOUND SOURCE 1435 cu. in. @ 1900 psi @ 6 depth (m)



RECORD				REPRODUCE				
INPUT GAIN (500 OHM IMP)	FILTERS LO/SLOPE	FILTERS HI	MAN / IFP	FILTERS LO	FILTERS HI	TRIP SENSE	INITIAL GAIN	MODE
36 63	5/15	64		5	64	3	3	AGC

DECK NO.	REEL NO.	CONSTANTS DAY NO.	CONSTANTS LINE NO.	CONSTANTS DIR. DEG.	FILE NO. FROM	FILE NO. TO	SP NO. FROM	SP NO. TO	TIME START	TIME FINISH
1	317	258	0017	055°	4	75			10:02	10:32
1	318				79	152			10:37	11:07
2	319				153	160			11:09	11:12
1	320				161	233			11:13	11:41
1	321				234	307			11:41	12:12
1	322				308	363			12:12	12:43
1	323				364	437			12:43	13:04
1	324				438	511			13:04	13:33
1	325				512	585			13:33	14:02
1	326				586	605			14:02	14:14
1	327				606	679			14:14	14:43
1	328				680	753			14:43	15:13
1	329				754	827			15:13	15:42
1	330				828	901			15:43	16:12
	331				902	975			16:13	16:38
	332				976	1049			16:39	17:05

U.S. GEOLOGICAL SURVEY

DFS V LOG

66 A

VESSEL Baikhosh CRUISE NO. BAIK92-2 DATE 9/16/92

SHOT INTERVAL (DISTANCE) _____ m OR TIME 22 sec.

OFFSET 400 m PRIME NAVIGATION GPS

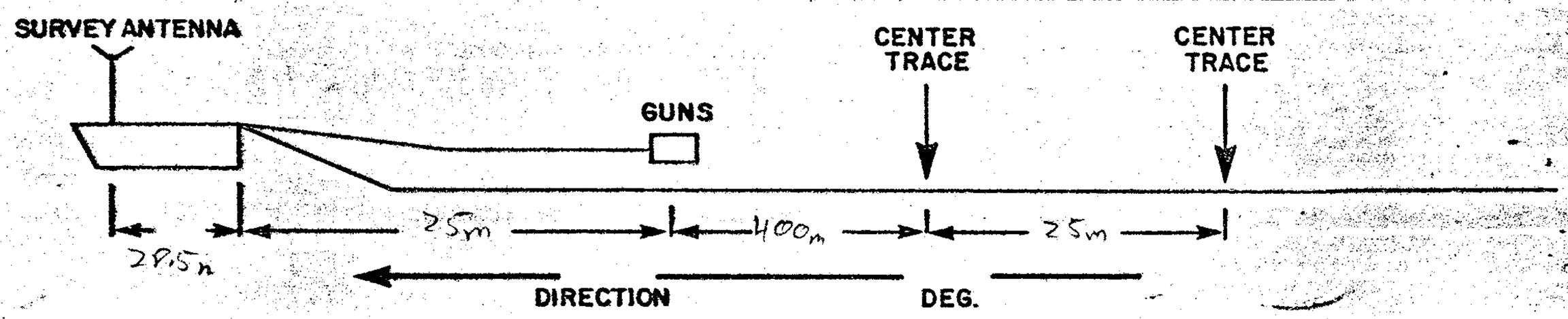
LINE NO. 17 DIR. ____ DEG. CABLE TYPE 96 trace

LOCATION Baikal Northern Basin TRACE INT. 25 m

SAMPLE RATE 4 MS. BPI 1600 SEG B FORMAT —

RECORD LENGTH 9 EXTENDED HEADER START WORD —

SOUND SOURCE 1435 cu. in. @ 1600 psi @ 6 depth (m)



RECORD				REPRODUCE				
INPUT GAIN (500 OHM IMP)	FILTERS LO/SLOPE	FILTERS HI	MAN / IFP	FILTERS LO	FILTERS HI	TRIP SENSE	INITIAL GAIN	MODE
36 dB	5/15	64		5	64	3	3	AGC

DECK NO.	REEL NO.	CONSTANTS DAY NO.	CONSTANTS LINE NO.	CONSTANTS DIR. DEG.	FILE NO. FROM	FILE NO. TO	SP NO. FROM	SP NO. TO	TIME START	TIME FINISH
1	333	258	0017	055	1050	1122			1706	1735
1	334				1123	1195			1736	1802
1	335				1196	1268			1803	1830
1	336				1269	1341			1831	19:00
1	337				1342	1414			19:01	19:29
1	338				1415	1487			19:30	19:59
1	339				1488	1560			20:00	20:29
1	340				1561	1633			20:31	21:00
1	341				1634	1706			21:01	21:31
1	342				1707	1779			21:32	22:01
1	343				1780	1852			22:02	22:30
1	344				1853	1936			22:32	23:00
1	345				1937	1998			23:00	23:29
1	346				1999	2026			23:29	23:42
1	347				2027	2099			23:42	00:09
1	348				2100	2172			00:09	00:37

U.S. GEOLOGICAL SURVEY

DFS V LOG

66B

VESSEL Balkash CRUISE NO. BA-92-1 DATE 9-16-92

SHOT INTERVAL (DISTANCE) _____ m OR TIME 22 sec.

OFFSET 400 m PRIME NAVIGATION GPS

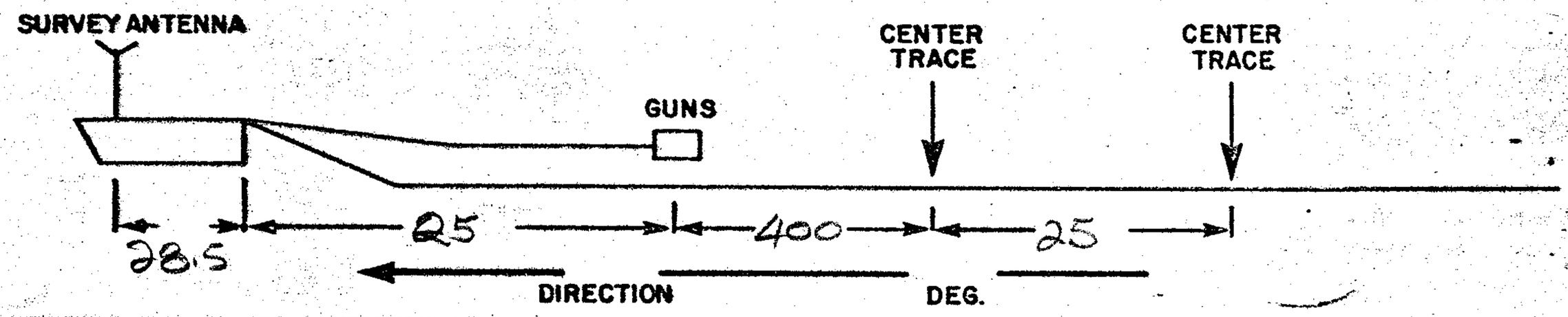
LINE NO. 17 DIR. 055° DEG. CABLE TYPE 96 Trace

LOCATION C. Basin TRACE INT. 25 m

SAMPLE RATE 4 MS. BPI 1600 SEG B FORMAT —

RECORD LENGTH 9 sec EXTENDED HEADER START WORD —

SOUND SOURCE 1435 cu. in. @ 1800 psi @ 6 depth (m)



RECORD				REPRODUCE				
INPUT GAIN (500 OHM IMP)	FILTERS LO/SLOPE	FILTERS HI	MAN / (FP)	FILTERS LO	FILTERS HI	TRIP SENSE	INITIAL GAIN	MODE
36dB	5/15	64		5	64	3	3	Acc

DECK NO.	REEL NO.	CONSTANTS DAY NO.	CONSTANTS LINE NO.	CONSTANTS DIR. DEG.	FILE NO. FROM	FILE NO. TO	SP NO. FROM	SP NO. TO	TIME START	TIME FINISH
1	349	258	0017	055	2173	2245			00:37	01:05
1	350				2246	2318			01:05	01:32
1	351				2319	2391			01:32	02:00
1	352				2392	2464			02:00	02:28
1	353				2465	2537			02:28	02:56
1	354				2538	2610			02:56	03:23
	355				2611	2683			03:24	03:51
	356				2684	2755			03:52	04:19
	357				2756	2830			04:20	04:46
	358				2831	2903			04:47	05:14
	359				2904	2972			05:15	05:42
	360				2973	3050			05:43	06:10
	361				3051	3123			06:11	06:37
	362				3124	3196			06:38	07:05
	363				3197	3269			07:08	07:34
					end	of	Line	17		

69

U.S. GEOLOGICAL SURVEY

DFS V LOG

VESSEL Ballard CRUISE NO. BAI-92-1 DATE 9-17-92

SHOT INTERVAL (DISTANCE) _____ m OR TIME 120 sec.

OFFSET 400m m PRIME NAVIGATION GPS

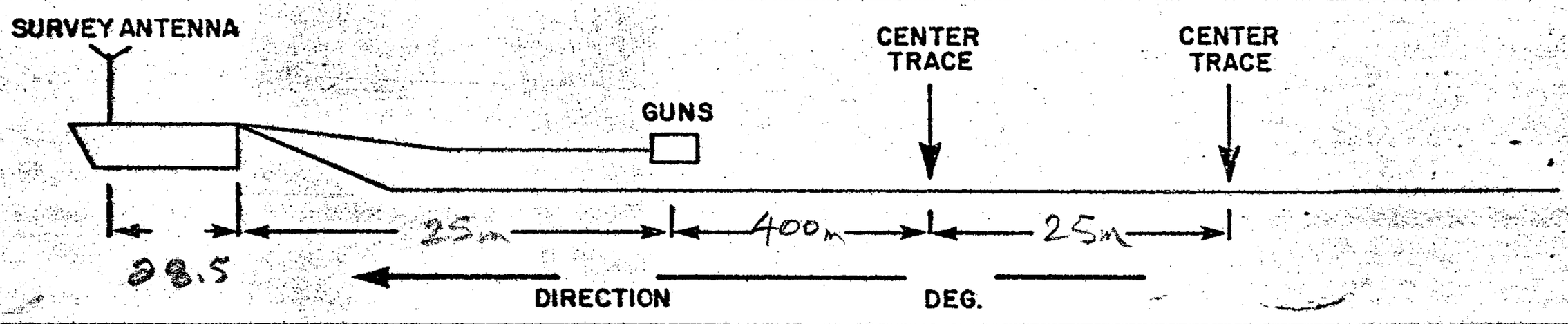
LINE NO. OBS 17 DIR. _____ DEG. CABLE TYPE 96 TR

LOCATION C. Basin TRACE INT. 25 m

SAMPLE RATE 4 MS. BPI 1600 SEG B FORMAT ✓

RECORD LENGTH 16 EXTENDED HEADER START WORD _____

SOUND SOURCE 120 Liter cu. in. @ 2000 psi @ 15-20 depth (m)



RECORD				REPRODUCE				
INPUT GAIN (500 OHM IMP)	FILTERS LO/SLOPE	FILTERS HI	MAN / (FP)	FILTERS LO	FILTERS HI	TRIP SENSE	INITIAL GAIN	MODE
36 dB	OUT / 18	64		OUT	64	3	3	AGC

DECK NO.	REEL NO.	CONSTANTS DAY NO.	CONSTANTS LINE NO.	CONSTANTS DIR. DEG.	FILE NO. FROM	FILE NO. TO	SP NO. FROM	SP NO. TO	TIME START	TIME FINISH
1	364	259	0017		1	42			1507	1631
1	365				43	84			1635	1757
1	366				85	126			1759	19:21
1	367				127	168			19:25	20:52
1	368				169	210			20:55	22:17
1	369				211	252			22:19	23:42
1	370				253	294			22:44	01:05
1	371				295	336			01:07	02:30
1	372				337	378			02:32	03:52
1	373				379	420			0354	0524
1	374				421	462			0526	0644
1	375				463	504			0646	08:07
1	376				505	566			08:09	09:31
1	377				567	588			09:33	10:55
1	378				589	630			10:57	12:19
1	379				631	04			12:21	12:41

OBSERVER'S MARINE REPORT

VESSEL Baikal DATE 9-15-92 # 67

Client USGS | Type instrument DFS V | Offset distance 400m

Area C. Basin | Record filter 5-64 Hz | Group interval 25m

State Baikal | Sample rate 4ms | Fold coverage 24m

Observer Michels | gun depth 6m | in.³ of guns 1435

Pre-plot	Shotpoint	File No.	Time	#1 dir.	Cable Depth	W.D.	Reel No.	Line No.	Remarks
		004	10:02			216	317	17	SOL 17 8 guns #1-8
		039	10:16	021		224			are off line
		073	10:30	026	10 - 8	211			Channel 8 off line
		103	10:46	024		245	318		
		137	11:00	022°	9 - 10	169			Tape 319 EXCESS PARITY
		173	11:15	053°		156			ERRORS.
		209	11:30	051°	10 - 10	196	320		
		244	11:45	052°		176	321		
		280	12:00	049°	8 - 8	339			
		314	12:15	050°	8 - 9	360	322		
		352	12:30	051°		446	322		
		388	12:45	052°	9 - 9	515	323		418-425 NO DATA
		428	13:00	054	10 - 9		23		Gun Delay Box Down.
		464	13:15	055	9 - 10	584	324		
		503	13:30	054	10 - 10	616	324		
		540	13:45	054	9 - 9	646	325		
		579	14:00	055°	10 - 8	669	325		
		608	14:15	053°	9 - 9	687	326		
		648	14:30	054°	8 - 9	709	327		Switched to 22 second
		684	14:45	054	10 - 8	733	328		Shot intervals @ SP 800
		723	1500	055°	9 - 12	768	328		
		757	1515	055°		790	329		
		799	1530	053°	8 - 14	814	329		
		836	1545	053	6 - 7	852			838 no shot
		878	1600	056	9 → 8	902			
		917	1615	052		906			
		956	1630	055	7 → 8	903			
		994	1645	055°		920			
		1035	1700	055°	9 - 8	926			
		1072	1715	055		932			
		1117	1732	048	9 — 8	935			
		1162	1750	053°	8 — 7	937			#7 off line
		1191	1800	066		937			7 guns at SP 1213
		1232	1816	054	8 — 10	939			23 sec Interval @ 1232
		1268	1830	054		938			
		1305	1845	053	8 — 7	938			
		1343	1902	048			337		

OBSERVER'S MARINE REPORT

VESSEL Balkash DATE 9-16-92 # 67A

Client USGS | Type instrument DFS-V | Offset distance 400 m

Area | Record filter 5-64 HZ | Group interval 25 m

State Baikal | Sample rate 4 ms | Fold coverage 24 m

Observer | gun depth 6 m | in.³ of guns 1435

Pre-plot	Shotpoint	File No.	Time	#1 dir.	Cable Depth	W.D.	Reel No.	Line No.	Remarks
		1378	19:15	058		937	337	017	
		1415	19:30	051		934	338		
		1454	19:45	053		935			
		1488	20:00	060		934	339		
		1493					340		Δt = 24 sec
		1528	20:15	059		935	340		
		1561	20:31	047		937	341		
		1597	20:45	053		933			
		1633	21:01	054		934	342		
		1668	21:15	056		933	[illegible]		
		1705	21:30	059		933	343		
		1740	21:45	043		936			
		1749					343		Δt = 23 c
		1777	22:00	051		937			
		1814	22:15	036		935			
		1854	22:32	050		936	344		
		1888	22:45			935			
		1926	23:00	052		934			
		1962	23:15	050		936			
		2001	23:30	051		934			
		2038	23:45	050		934			Δt = 22 c
		2079	0000	050		954			
		2117	0015	052		935	347		DAY 259
		2158	0030	051		930	347		
		2197	0045	052		927	348		
		2237	0100	055		907	349		
		2276	0115	052		917	350		Δt = 23 sec.
		2317	0130	055		911	350		
		2356	0145	053		907	351		
		2436	0215	052		885	352		
		2472	0230	056°		884	352		
		2511	0245	058°		871	352		Δt = 22 sec.
		2548	0300	057		866	354		
		2591	0315	052		852	354		
		2633	0330	052		868	355		
		2675	0345	056°			355		
		2719	0404	058°		730	356		
		2768	0423	054		712	357		

OBSERVER'S MARINE REPORT

VESSEL Balkhash DATE 9/17/92 # 70

Client	USGS	Type instrument	DFS - II	Offset distance	400 m
Area	Baikal	Record filter	Out - 64 Hz	Group interval	25 m
State	Central Basin	Sample rate	4 ms	Fold coverage	
Observer	Unger/et al.	gun depth	15 - 20 m	in.³ of guns	120 l

Pre-plot	Picture Shotpoint	File No.	Time	#1 dir.	Cable Depth	W.D.	Reel No.	Line No.	Remarks
	5	1	1507	233		181	364	10517	SOL OBS 17
		5	1514	231					
	17	13	1530	233		255			
	24	20	1545			460			Only 1 gun from this 60
	33	28	1600			499			
	43	39	1622			524			
	52	48	1644			651	365		
	58	63	1714			670			
	67	72	1738			629			
	73	78	1745			700			
	92	96	1820			720	366		
	96	101	1831			702			
	103	108	1845	234		724			
	119	124	1915			866			
	122	127	1930	238		865	367		
	132	137	19:52			865			
	137	142	20:01			864			
	146	151	20:19	241		863			
	154	159	20:35	227		853			
	160	165	20:47	232		851			
	167	172	21:00	234		893	368		
	175	180	21:16	229		903			
	182	187	21:31	227		908			
	191	196	21:50	247		911			
	197	202	22:00	236		917			
	204	209	22:15	250		923			
	212	217	22:31	233		927	369		
	219	224	22:45	233		931			
	226	232	23:00	233		933			
	234	239	23:15	231		933			
	241	246	23:30	230		935			
	249	254	23:45	231		935	370		
	257	262	00:00	231		935			
	265	270	00:15	232		934			JULIAN DAY 261
	275	280	00:37	230		934			
	285	290	01:00	231		934			
	295	300	01:15	232		935	371		

OBSERVER'S MARINE REPORT

VESSEL Balkhash DATE 9/16/92 # 68

Client USGS Type instrument DFS-V Offset distance 400m

Area Record filter .5-64 Hz Group interval 25m

State BAIKAL Sample rate 4 ms Fold coverage 24

Observer Unar gun depth 6m in.^{3} of guns 1435

Pre-plot	Shotpoint	File No.	Time	#1 dir.	Cable Depth	W.D.	Reel No.	Line No.	Remarks
		2789	0431	056		714	357	17	
		2836	0449	058		716	358		
		2868	0500	056		695	358		
		2908	0516	044		660	359		
		2957	0534	053		670	359		
		2989	0548	051		679	360		
		3026	0600	060		685	360		
		3074	0618	049		518			
		3107	0630	064		543			
		3156	0650	061		493			
		3184	07:00	058		453	362		
		3225	07:15	073		247	363		
		3257	07:30	050		224			
		3269	07:34			199.			
					end of line 17				

OBSERVER'S MARINE REPORT

VESSEL Baikal DATE 9-17-92 #70A

Client USGS | Type instrument DFS V | Offset distance 400 m

Area C. Basin | Record filter OUT - 64 Hz | Group interval 25 m

State Baikal | Sample rate 4 ms | Fold coverage

Observer Nichol | gun depth 15-20 m | in.³ of guns 120 liters

Pre-plot	Shotpoint	File No.	Time	#1 dir.	Cable Depth	W.D.	Reel No.	Line No.	Remarks
	305	310	01:36	230°		936	371	OBS	17
	315	320	01:56	231°		930	371		
	325	330	02:16	230		930	371		
	335	340	02:36	232°		930	372		
	345	350	0256	234		930	372		
	355	360	0316	234		934	372		
	365	370	0336	230		934	372		
	377	382	0400	232		939	373		2 guns on line file 399
	392	397	0430	233		939	373		
	407	412	0500	236		938	373		
	421	426	0530	234		936	374		
	435	440	0600	235		931	374		
	452	456	0630	236		928	374		
	466	470	07:00	236		917	375		
	476	480	07:21	237		896			
	486	491	07:41	236		841			
	496	501	08:01	234		794			
	506	511	08:21	232		773	376		
	516	521	08:42	233		736			
	526	531	09:01	233		704			
	536	541	09:22	233		676			538?
	546	551	09:41	233		648	377		
	559	561	10:00	229		613			
	569	571	10:21	232		571			
	579	581	10:40	232		523			
	589	591	11:02	230		447	378		
	599	601	11:22	232		364			
	608	611	11:40	230		314			
	618	621	12:00	231		178			
	629	631	12:20			140			
			12:41			215	EOL	OBS	17