

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	179-01	Channels:	48	Source:	75cm 6.I.
Area:	5-Armory R.	Sample Rate:	1ms	Shot Int.:	10s.
				Reel:	85.

Sheet Number: 1

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
1	1		20 July 2004	202	01:51:59	Start	40°57'N	50°39'W	1st test shot 01:51:59
1	1	130			01:55:34.325	End	40.955183	-50.651631	
2	2	131			01:55:46.324	Start	40.954986	-50.651578	
2	2	260			02:17:19.423	End	40.922776	-50.654675	tail - 200 of 01.1202
3	3	261			02:17:24.422	Start	40.922529	-50.654620	
3	3				02:29:11.441				No return from 01000004.332
3	3	391			02:39:09.502	End	40.885947	-50.654838	
4	4	392			02:39:19.504	Start	40.885763	-50.654805	
4	4	521			03:00:49.508	End	40.865495	-50.650109	
5	5	522			03:00:59.510	Start	40.865263	-50.650066	
5	5	651			03:22:24.677	End	40.825997	-50.645347	Reels #1-#5 -> target lock sequence
6	6	652			03:22:39.676	Start	40.835372	-50.645312	
6	6	781			03:44:09.766	End	40.806010	-50.646220	
7	7	782			03:44:19.765	Start	40.805797	-50.640587	
7	7	911			04:05:14.779	End	40.776408	-50.635717	
8	8	912			04:05:54.978	Start	40.776178	-50.635667	
8	8	1041			04:27:29.941	End	40.747216	-50.631247	
9	9	1042			04:27:39.943	Start	40.746993	-50.631208	
9	9	1171			04:49:10.030	End	40.717768	-50.626513	
10	10	1172			04:49:20.029	Start	40.717541	-50.626470	Lost shot 1252
10	10	1302			05:11:00.118	End	40.688364	-50.627379	
11	11	1303			05:11:10.121	Start	40.688147	-50.627366	
11	11	1432			05:32:40.208	End	40.659333	-50.617126	
12	12	1433			05:32:50.209	Start	40.659102	-50.617372	
12	12	1562			05:54:20.204	End	40.629945	-50.612509	
13	13	1563			05:54:30.206	Start	40.629720	-50.612453	
13	13	1692			06:16:00.383	End	40.600524	-50.604845	1690

01011  
01011  
01011

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	179-01	Channels:	48	Source:	HS/FS cuin	GT
Area:	J-Mammals R	Sample Rate:	1 ms	Shot Int.:	10 sec	Reel em:
						8 sec

Sheet Number: 2

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
1	14	1643	20 July 2004	202	00:16:10.385	Start	40.600303	-50.607806	1691	Shot of 38 w/15g
	14	1822			00:35:40.421	END	40.572106	-50.603696	1820	
	15	1823			00:37:50.441	Start	40.521900	-50.603681	1821	possible error w/ shot clock at 2
	15	1952			00:39:20.557	End	40.542339	-50.598943	1950	Shot 1930 06:55:40.542
	16	1953			00:39:30.560	Start	40.542110	-50.598894	1951	
	16	2082			00:41:00.643	End	40.512449	-50.593937	2080	
	17	2083			00:41:10.649	Start	40.512215	-50.593914	2081	
	17	2212			00:42:40.735	End	40.482581	-50.589227	2210	
	18	2213			00:42:50.738	Start	40.482344	-50.589179	2211	possible error w/ shot clock at 2
	18	2342			00:04:20.8	End	40.452384	-50.584321	2340	07:42:30.736
	19	2343			00:04:30.8	Start	40.452160	-50.584203	2341	
	19	2472			00:26:00.9	End	40.422218	-50.579484	2470	
	20	2473			00:26:10.9	Start	40.421982	-50.579450	2471	
	20	2602			00:47:41	End	40.391892	-50.574640	2600	
	21	2603			00:47:51	Start	40.391663	-50.574602	2601	
	21	2732			00:09:21	End	40.361345	-50.569668	2730	
	22	2733			00:09:31	Start	40.361116	-50.569618	2731	
	22	2862			00:31:01	End	40.330761	-50.564686	2860	
	23	2863			00:31:11	Start	40.330023	-50.564641	2861	
	23	2992			00:52:41	END	40.298672	-50.559604	2990	
	24	2993			00:52:51	Start	40.298428	-50.559572	2991	
	24	3122			00:14:21	End	40.206854	-50.554257	3120	
	25	3123			00:14:31	Start	40.206598	-50.554229	3121	
	25	3252			00:36:01	End	40.232458	-50.548725	3250	
	26	3253			00:36:11	Start	40.232183	-50.548693	3251	
	26	3382			00:57:41	End	40.194637	-50.542751	3380	More streamer noise because we moved
	27	3383			00:57:51	Start	40.194335	-50.542697	3381	Shot into the G. Str.
	27	3512			00:19:21	End	40.155611	-50.536492	3510	Speed slowed from

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	179-01	Channels:	4-8	Source:	75/75 cur
Area:		Sample Rate:		Shot Int.:	
					61

Sheet Number: 3

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Syst	Comments
1	28	3513	20 Jul 2004	202	11:18:31	Start	40.155382	-50.534422	3511	11:39 - Ship started to turn to
	28	3642			11:41:01	end	40.14988	-50.528107	3640	begin Line 2
	29	3643			11:41:11	Start	40.14806	-50.527731	3641	
	29	3662			11:44:21	end	40.118050	-50.519587	3660	
2	30	0001			11:51:22	Start	40.122064	-50.514267	0001	11:42 Gun placed diagonally and from port
	30	0130			12:12:52	end	40.128533	-50.526984	0130	Port gun stopped - Starboard
	31	0131			12:13:02	Start	40.128574	-50.527046	0131	gun started
	31	0260			12:34:32	end	40.134826	-50.533715	0260	227 Possible error w/ subclock 12:28:20, 238:150
	32	0261			12:34:42	Start	40.134963	-50.533771	1229	at wpt 2 (Bolt 2) 0261
	32	0390			12:56:17	end	40.144594	-50.544567	0390	
	33	0291			12:56:23	Start	40.144637	-50.544630	0391	
	33	0520			13:17:53	end	40.151294	-50.522015	0520	
	34	0521			13:18:03	Start	40.151341	-50.522060	0521	
	34	0650			13:39:33	end	40.156099	-50.557371	0650	
	35	0651			13:39:43	Start	40.156161	-50.557389	0651	673 Possible error w/ subclock 12:30:53
	35	0780			14:01:13	end	40.161491	-50.563449	0780	
	36	0781			14:01:23	Start	40.161550	-50.563478	0781	
	36	0910			14:22:53	end	40.170059	-50.573386	0910	
	37	0911			14:22:03	Start	40.170162	-50.573461	0911	
	37	1040			14:44:33	end	40.182260	-50.587493	1040	
	38	1041			14:44:43	Start	40.182776	-50.587581	1041	
	38	1170			15:06:13	end	40.145261	-50.601432	1170	
	39	1171			15:06:23	Start	40.145383	-50.601509	1171	
	39	1300			15:27:53	end	40.207935	-50.615229	1300	
	40	1301			15:28:03	Start	40.208035	-50.615348	1301	
	40	1430			15:49:33	end	40.220562	-50.629285	1430	
	41	1431			15:49:43	Start	40.220670	-50.629386	1431	*1451, *1452, *1453, *1454, *1455
	41	1560			16:11:13	end	40.233040	-50.643151	1560	*1456, *1457 Possible error w/ subclock

1533:20 - 1535:20

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	179-01	Channels:	48	Source:	18/75 cas
Area:		Sample Rate:		Shot Int.:	
				Reel in:	8 sec

Sheet Number: 4

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
2	42	1561	20 Jun 2004	202	16:11:23	Start	40.233132	-50.643268	1561	
	42	1690			16:32:54	end	40.245903	-50.657485	1690	
	43	1691			16:33:04	Start	40.246003	-50.657601	1691	
	43	1820			16:54:34	end	40.259117	-50.672265	1820	
	44	1821			16:54:44	Start	40.259211	-50.672390	1821	
	44	1950			17:16:14	end	40.273158	-50.688083	1950	
	45	1951			17:16:24	Start	40.273274	-50.688218	1951	
	45	2080			17:37:54	end	40.288533	-50.705334	2080	
	46	2081			17:38:04	Start	40.288655	-50.705474	2081	
	46	2210			17:59:34	end	40.305558	-50.724579	2210	
	47	2211			17:59:44	Start	40.305673	-50.724721	2211	
	47	2340			18:21:14	end	40.323937	-50.745352	2340	
	48	2341			18:21:24	Start	40.324088	-50.745527	2341	2450, 2460 Possible error w/ Start/End
	48	2470			18:42:54	end	40.344058	-50.768280	2470	
	49	2471			18:43:04	Start	40.344220	-50.768461	2471	2534 Possible error w/ Start/End
	49	2600			19:04:34	end	40.364652	-50.791233	2600	
	50	2601			19:04:44	Start	40.364815	-50.791415	2601	2699, 2726 Possible error w/ Start/End
	50	2730			19:26:14	end	40.386354	-50.815437	2730	
	51	2731			19:26:24	Start	40.386525	-50.815684	2731	* 2747 Possible error w/ Start/End 18:28:20
	51	2860			19:47:55	end	40.408891	-50.840696	2860	
	52	2861			19:48:04	Start	40.409055	-50.840868	2861	
	52	2990			20:09:34	end	40.431472	-50.865744	2990	
	53	2991			20:09:44	Start	40.431655	-50.866160	2991	
	53	3120			20:31:15	end	40.454958	-50.891221	3120	
	54	3121			20:31:25	Start	40.455129	-50.891417	3121	
	54	3250			20:52:55	end	40.476558	-50.916465	3250	
	55	3251			20:53:05	Start	40.476766	-50.916647	3251	
	55	3380			21:14:35	end	40.499118	-50.941679		

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	179-01	Channels:	48	Source:	PS/Kevin
Area:	I-Kennedy	Sample Rate:	1ms	Shot Int:	

Reel len: 8 sec.

Sheet Number: 5

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
2	56	3381	20 July 2004	202	21:14:45	Start	40.446316	-50.941837	3381
	56	3410			21:36:15	End	40.521691	-50.944826	3510
	57	3511			21:36:25	Start	40.521863	-50.947698	3511
	57	3626			21:55:35		40.326 'N	50.59.4'W	3626 Last shot before connector work and turn off line. Go to 40s rep rate
									'Generator' only start.
	57	3640			22:04:51	End	40.546516	-50.980273	3640
	58	3641			22:05:31	Start	40.545757	-50.977739	3641
									Positive shot recorder, 3643-3646, 3649-3654
		3675			22:28:09		40.518983	-50.944367	3675 return to 10s. rep. Co. I. shooting still looping back
		3766			22:42:14		40.510334	-50.954152	3766 back on line
	58	3770			22:43:59	End	40.510534	-50.954807	3770
	59	3771			22:44:09	Start	40.511015	-50.954961	3771
	59	3900			23:05:39	End	40.528685	-50.974647	3900
	60	3901			23:05:49	Start	40.528832	-50.974811	3901
		4032			23:25:59		40.549314	-50.947798	4032 Rock to point of line turnoff
	60	4030			23:27:14		40.550683	-50.947309	4030
	61	4031			23:27:29		40.550844	-50.949448	4031
	61	4160			23:48:59		40.573069	-51.024457	4160
	62	4161			23:49:09		40.573251	-51.024646	4161 Positive shot recorder 4227-4230
2	62	4230	21 July 2004	203	00:10:39		40.595725	-51.044834	4230
	63	4291			00:10:49		40.595703	-51.050025	4291
	63	4420			00:32:19		40.618304	-51.055110	4420
	64	4421			00:32:29		40.618479	-51.057307	4421
	64	4550			00:53:59		40.640725	-51.100354	4550
	65	4551			00:54:09		40.640910	-51.100543	4551
	65	4660			01:15:39		40.663349	-51.125636	4660
	66	4681			01:16:49		40.663532	-51.125805	4681

Shot #

# KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	4/8	Source:	75/75 sec in
Area:	J-Avenue	Sample Rate:	/ms	Shot Int.:	10s
				Reel:	8 sec.

Sheet Number: 6

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
2	66	4810	21 Jul 2001	203	01:37:14	End	40.680779	-51.151045	4810	
	67	4811			01:37:29	Start	40.686147	-51.151226	4811	01:57 stop shooting
	67	4840			01:58:54	End	40.706034	-51.173374	4840	
	68	4841			01:59:09	Start	40.706062	-51.173662	4841	Current: 48.80
Page 1 of 18	68	4879			02:05:29	End	40.708265	-51.188273		
	69	4880/1			02:14:15	Start	40.718214	-51.188609		
		5027/48			02:22:05		40.719421	-51.194852		1st shot on line
		5029			02:22:25					No return from OYO
3	69	1			02:29:57	Start	40.709244	-51.168539	1	Shutdown program to reload @ shot #1
		2103			02:47		40.710610	-51.098710		rework reel #69
	69	130			02:51:27	End	40.679947	-51.164051	130	approx. way point for studio line #3
	70	131			02:51:37	Start	40.679726	-51.164026	131	
	70	260			03:13:07	End	40.650258	-51.160345	260	
	71	261			03:17:17	Start	40.650540	-51.160316	261	
	71	390			03:34:47	End	40.621773	-51.156537	390	
	72	391			03:34:57	Start	40.621559	-51.156531	391	
	72	520			03:56:27	End	40.593661	-51.152783		
	73	521			03:56:37	Start	40.593449	-51.152755		
	73	650			04:18:07	End	40.544954	-51.149170		
	74	651			04:18:17	Start	40.544737	-51.149161		
	74	780			04:34:46	End	40.536564	-51.145502		
	75	781			04:34:56	Start	40.536342	-51.145476		
	75	910			05:01:07	End	40.506720	-51.143588		
	76	911			05:01:37	Start	40.506524	-51.143566		
	76	1041			05:03:17	End	40.494412	-51.136190		
	77	1042			05:23:27	Start	40.494204	-51.136146		
	77	1171			05:44:57	End	40.446392	-51.132546		

No return from Oyo 5/19/50 05:08:07

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	Ku179-01	Channels:	48	Source:	HS175 swim	GI
Area:	T-Blue only	Sample Rate:	1 sec	Shot Int.:	16 Sec	Reel en:

Sheet Number: 7

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
3	78	1172	21 July 2004	203	05:45:07	Start	40.446176	-51.132515	
	78	1301			06:06:37	End	40.448816	-51.129092	
	79	1302			06:06:47	Start	40.448686	-51.129083	
	79	1431			06:28:17	End	40.391065	-51.125730	1301 shut 1344 possible clock error 06:13:01
	80	1432			06:28:27	Start	40.340846	-51.125697	1431
	80	1561			06:44:57	End	40.342821	-51.122108	1560 shut
	81	1562			06:50:07	Start	40.362601	-51.122086	1561 1606 possible shut clock error 06:56:42
	81	1691			07:11:37	End	40.334252	-51.118517	1690
	82	1692			07:11:47	Start	40.334631	-51.118483	1691
	82	1821			07:33:17	End	40.305491	-51.114808	1820
	83	1822			07:33:27	Start	40.305278	-51.114778	1821
	83	1951			07:54:57	End	40.277308	-51.111287	1950
	84	1952			07:55:07	Start	40.277098	-51.111263	1951
	84	2081			08:16:38	End	40.244903	-51.107837	2080
	85	2082			08:16:48	Start	40.244699	-51.107806	2081 1-3' stars white caps, 7.4m/s wind
	85	2211			08:38:18	End	40.222396	-51.104435	2210
	86	2212			08:38:28	Start	40.222911	-51.104400	2211
	86	2341			08:59:58	End	40.194402	-51.100477	2340
	87	2342			09:00:07	Start	40.194189	-51.101018	2341
	87	2441			09:21:37	End	40.166173	-51.097891	2470
	88	2472			09:21:47	Start	40.165963	-51.097865	2471
	88	2601			09:43:16	End	40.137505	-51.092400	2600
	89	2602			09:43:26	Start	40.137287	-51.094196	2601
	89	2731			10:04:56	End	40.104473	-51.090652	2730
	90	2732			10:05:06	Start	40.108825	-51.090626	2731 dol plus wings shut down
	90	2861			10:26:36	End	40.081474	-51.087078	2860 10162 shut 2797
					Terminate line 3 here ~ 11.5 min start of wpt.				
					acquisition				

Reel #91 does not exist, a line change was the cause.

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	Kn179-01	Channels:	48	Source:	75/75 sec	GI
Area:	Stikunally	Sample Rate:	1ms	Shot Int.:	16 sec	
				Reel len:	8 sec	

Sheet Number: 8

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
<b>Roll 4</b>									
92	001	21 July	203		16:59:32	Start	40.045286	-51.089866	in turnst Roll 4
92					11:21:01	end	40.050040	-51.082891	11137 m line 4 course
93	130				11:21:11	Start	40.050165	-51.082842	1121 going turn west at Roll 4
93	260				11:42:42	END	40.068426	-51.106459	260
94	261				11:42:52	Start	40.068578	-51.106148	261
94	390				12:04:21	end	40.089026	-51.133101	390
95	391				12:04:31	Start	40.089128	-51.133308	391
95	420				12:26:01	end	40.108904	-51.158641	520
96	521				12:26:11	Start	40.108947	-51.158819	521
96	650				12:47:41	end	40.128557	-51.184035	650
97	651				12:47:51	Start	40.128718	-51.184228	651
97	780				12:09:21	end	40.147748	-51.209931	780
98	781				12:09:31	Start	40.147878	-51.209104	781
98	910				12:31:02	end	40.166587	-51.252798	910
99	911				12:31:12	Start	40.166518	-51.252986	911
99	1040				12:52:42	end	40.184587	-51.256330	1040
100	1041				12:52:52	Start	40.184727	-51.256522	1041
100	1176				14:14:22	end	40.202965	-51.280140	1176
101	1171				14:14:32	Start	40.203103	-51.280313	1171
101	1300				14:36:02	end	40.221520	-51.307956	1300
102	1301				14:36:12	Start	40.221465	-51.304134	1301
102	1430				14:57:42	end	40.239797	-51.327688	1430
103	1431				14:57:52	Start	40.239934	-51.327889	1431
103	1570				15:15:23	End	40.258669	-51.352576	1570
104	1561				15:14:33	Start	40.259610	-51.352799	1561
104	1690				15:41:02	end	40.278499	-51.378044	1690
105	1691				15:41:12	Start	40.278646	-51.378249	1691
105	1820				16:02:42	end	40.298042	-51.403430	1820

Shot

15272 - 1st crossing of line 4

Possible error w/ Channel 2 1148



KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN 179-01	Channels:	48	Source:	FS/FS cur
Area:	J- Area only	Sample Rate:	1 ms	Shot Int:	10 sec
				Reel len:	8 sec

Sheet Number: 9

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
4	106	1821	21 July	203	16:02:52	Start	40.298185	-51.403612	18.21
	106	1950			16:24:22	end	40.312716	-51.428891	19.50
	107	1951			16:24:32	Start	40.317870	-51.429066	19.51
	107	2080			16:42:02	end	40.337106	-51.453974	20.80
	108	2081			16:46:12	Start	40.337253	-51.454160	20.81
	108	2210			17:07:42	end	40.357193	-51.479929	22.10
	109	2211			17:07:52	Start	40.357338	-51.480129	22.11
	109	2340			17:29:23	end	40.377519	-51.506233	23.40
	110	2341			17:29:33	Start	40.374692	-51.506424	23.41
	110	2470			17:51:03	end	40.398761	-51.533800	24.70
	111	2471			17:51:13	Start	40.398940	-51.534010	24.71
	111	2600			18:12:43	end	40.420537	-51.561895	26.00
	112	2601			18:12:53	Start	40.420694	-51.562111	26.01
	112	2730			18:34:23	end	40.441830	-51.589504	27.30
	113	2731			18:34:33	Start	40.441986	-51.589718	27.31
	113	2860			18:56:03	end	40.462960	-51.616940	28.60
	114	2861			18:56:13	Start	40.463134	-51.617151	28.61
	114	2990			19:17:44	end	40.484111	-51.644482	29.90
	115	2991			19:17:54	Start	40.484284	-51.644693	29.91
	115	3033			19:24:54	end	40.490294	-51.652563	30.33
5	116	3082			19:33:04	Start	40.497661	-51.659090	1
	116	3211			19:54:34	end	40.523530	-51.665854	32.11
	117	3212			19:54:44	Start	40.523816	-51.665713	32.12
									32.12
		3269			20:04:13		40.539631	-51.638778	188
		1			20:05:43		40.541447	-51.631531	189
	117	72			20:17:34		40.561592	-51.623789	260
	118	73			20:17:44		40.561749	-51.623982	261

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KNORR 179-01 Hi Res MCS Tape Log

Cruise:	K1174-01	Channels:	48	Source:	75/75 cuin 67L
Area:	J-Macsway 10	Sample Rate:	1 usSec	Shot Int.:	10 sec
				Reel len:	8 sec

Sheet Number: 10

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
5	118	73	21 July	203	20:17:44	Start	40.561764	-51.623882	764	
	118	202			20:39:14	End	40.540044	-51.644324	390	
	119	203			20:39:24	Start	40.539868	-51.644490	391	
	119	332			21:00:54	End	40.516208	-51.666880	520	
	120	333			21:01:04	Start	40.515940	-51.666947	521	shot = 588, cross waypoint 502 * 5
	120	462			21:22:34	End	40.486133	-51.665017	650	possible start/end error * 548 * 575
	121	463			21:22:44	Start	40.486049	-51.665012	651	
	121	592			21:44:14	End	40.454905	-51.661504	780	
	122	593			21:44:24	Start	40.454658	-51.661462	781	
	122	722			22:05:54	End	40.422689	-51.657925	910	
	123	723			22:06:04	Start	40.422452	-51.657895	911	
	123	852			22:27:34	End	40.390868	-51.654406	1040	
	124	853			22:27:44	Start	40.390627	-51.654386	1041	
	124	982			22:44:14	End	40.359300	-51.650864	1170	
	125	983			22:44:24	Start	40.359049	-51.650832	1171	
	125	1112			23:10:54	End	40.328252	-51.649348	1300	
	126	1113			23:11:04	Start	40.328020	-51.649316	1301	Possible Start/End error #1109-1111
	126	1242			23:52:34	End	40.297664	-51.645769	1430	
	127	1243			23:52:44	Start	40.297475	-51.643736	1431	
	127	1392			23:54:14	End	40.266905	-51.640258	1560	
	128	1393			23:54:24	Start	40.266663	-51.640236	1561	
	128	1502			00:15:55	End	40.235728	-51.636706	1690	
	129	1503			00:16:05	Start	40.235682	-51.636674	1691	
	129	1632			00:37:35	End	40.205631	-51.633176	1820	
	130	1633			00:37:45	Start	40.205387	-51.633147	1821	
	130	1762			00:59:15	End	40.125515	-51.629759	1950	
	131	1763			00:59:25	Start	40.125291	-51.629730	1951	
	131	1892			01:20:55	End	40.145484	-51.626268	2080	

\* 583

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	179-01	Channels:	48	Source:	75/95 cum G.I.
Area:	5-Armory R	Sample Rate:	1 ms	Shot Int:	10s
				Reclen:	8s

Sheet Number: 11

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
5	132	1813	22 July	204	04:12:105	Start	40.145257	-51.626243	2081	
	132	2022			04:12:35	End	40.115678	-51.622798	2210	
	133	2023			04:12:45	Start	40.115445	-51.622772	2211	
	133	2152			02:04:15	End	40.085882	-51.619397	2340	
	134	2153			02:04:25	Start	40.085661	-51.619373	2341	
	134	2282			02:25:55	End	40.056144	-51.616032	2470	
	135	2283			02:26:05	Start	40.055914	-51.616025	2471	
	135	2412			02:42:35	End	40.026703	-51.612693	2600	
	136	2413			02:42:45	Start	40.026670	-51.612655	2601	
	136	2434			02:57:55		40.012868	-51.611082	2602	2602 258 here failure on compressor
										air gun off. #2602 last shot
5	137	1	22 July	204	04:33:36	Start	40.031983	-51.613301	0427	resumed acquiring data
	137	130			04:42:42	End	40.013234	-51.611354	0434	7 air gun.
	138	131			04:47:57	Start	40.013078	-51.611328		File 132 up where gunway assembly off.
	138	2600			05:09:27	End	39.985487	-51.608057	2600	
	139	2601			05:09:37	Start	39.985241	-51.608032	2601	
	139	390			05:31:07	End	39.953044	-51.604827	390	
	140	391			05:31:17	Start	39.952808	-51.604805	391	
	140	520			05:52:47	End	39.926886	-51.601911	520	
	141	521			05:52:57	Start	39.926668	-51.604383	521	0559 beginning EOL 5 shot 0562
	141	650			06:14:27	End	39.913454	-51.622782	650	0607 end ship turn to Bull shot 606
6	142	651			06:14:37	Start	39.913464	-51.623078	651	
	142	780			06:36:02	End	39.967541	-51.659298	780	
	143	781			06:36:17	Start	39.907443	-51.659588	781	
	143	910			06:57:47	End	39.901444	-51.695495	910	shot 895 begin "possible" error w/ shot lock
	144	911			06:57:57	Start	39.901392	-51.696266	911	
	144	1040			07:19:37	End	39.895331	-51.732730	1040	

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	179-01	Channels:	48	Source:	TS/TS with AI
Area:	5-Armstrong	Sample Rate:	1 m/sec	Shot Int.:	10 sec
				Reel en:	8 sec

Sheet Number: 12

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
6	145	1041	23 July 2004	704	7:19:37	Start	39.885288	-51.733011	1041
	145	1170			7:41:07	End	39.889207	-51.748378	1170
	146	1171			7:41:17	Start	39.889166	-51.748469	1171 0756Z File 1264 EOL6 Begin turn
	146	31			8:07:09	End	39.889558	-51.800252	1300 0803Z File 1230 Bolt
7	147	32			8:07:19	Start	39.889781	-51.800233	1301
	147	161			8:28:50	End	39.929303	-51.802624	1430
	148	162			8:29:00	Start	39.929532	-51.802650	1431
	148	291			8:50:30	End	39.959062	-51.805468	1560
	149	292			8:50:40	Start	39.959291	-51.805077	1561
	149	421			9:12:10	End	39.988945	-51.803973	1690
	150	422			9:12:20	Start	39.989171	-51.802610	1691
	150	551			9:33:50	End	40.018356	-51.810812	1820
	151	552			9:34:00	Start	40.018579	-51.810038	1821
	151	681			9:55:30	End	40.048089	-51.812422	1950
	152	682			9:55:40	Start	40.048377	-51.812443	1951
	152	811			10:17:10	End	40.077788	-51.814873	2080
	153	812			10:17:20	Start	40.078009	-51.814901	2081
	153	941			10:38:50	End	40.107325	-51.817208	2210
	154	942			10:39:00	Start	40.107551	-51.817213	2211
	154	1071			11:00:30	End	40.136694	-51.819602	2340 1051Z - 3rd time approaching of
	155	1072			11:00:40	Start	40.136920	-51.819628	2341
	155	1201			11:22:10	End	40.166484	-51.8221957	2470
	156	1202			11:22:20	Start	40.166719	-51.8221976	2471
	156	1331			11:43:50	End	40.196604	-51.824311	2600
	157	1332			11:44:00	Start	40.196839	-51.824322	2601
	157	1461			12:05:30	End	40.227343	-51.822632	2730
	158	1462			12:05:40	Start	40.227595	-51.822638	2731
	158	1591			12:27:10	End	40.258106	-51.8228105	2860

Line 7

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 cu in
Area:	5-Hydrology	Sample Rate:	1 ms	Shot Int:	10 sec
				Reel en:	8 sec

Sheet Number: 13

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
7	159	1592	22 July 2004	204	12:27:20	Start	40.258348	-51.828105	2861
	159	1721			12:44:50	end	40.289008	-51.8227042	2990 1255 Z - Start of Line 8
7/8	160	1722			12:49:00	Start	40.289187	-51.826749	2991
8	160	1851			13:10:30	end	40.363769	-51.786810	3126
	161	1852			13:10:40	Start	40.363874	-51.786498	3121
	161	1981			13:32:10	end	40.372873	-51.769692	3250 1322 Z - Stepped shooting,
	162	1982			13:32:20	Start	40.372876	-51.769538	3251 hose has blown
	162	2111			13:53:51	end	40.370982	-51.770833	3380 1348 Z189 - 3194 corresponds to
	163	0001			14:18:43	Start	40.373745	-51.750138	0001 time to hose blowing
	163	0130			14:40:18	end	40.327936	-51.711685	0130 1449 Z - Cruise resumed firing
	164	0131			14:40:23	Start	40.328042	-51.711390	0131
	164	240			15:01:51	End	40.341686	-51.673701	260
	165	241			15:02:04	Start	40.341729	-51.673408	261 1509:45 no return from 040.
	165	299			15:23:43	end	40.354944	-51.655573	2990
	166	521			15:23:53	Start	40.355026	-51.655274	2991
	166	522			15:45:23	end	40.367187	-51.597325	520
	167	522			15:45:33	Start	40.367274	-51.597059	521
	167	651			16:07:03	end	40.379488	-51.559047	650
	167	652			16:07:13	Start	40.379532	-51.558760	651
	168	781			16:28:43	end	40.397995	-51.520326	780
	169	782			16:28:53	Start	40.397901	-51.520039	781
	169	911			16:50:23	end	40.401103	-51.481704	910
	170	912			16:50:33	Start	40.401185	-51.481433	911 17:05 Z Cruise shut down
	170	1041			17:12:03	end	40.417710	-51.442623	1040
	171	1042			17:12:13	Start	40.417914	-51.442592	1041
	171	1171			17:33:43	end	40.417159	-51.454487	1170
	172	1172			17:33:53	Start	40.417067	-51.454645	1171 recycling Reel # 172

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	179-1	Channels:	48	Source:	45/Sec in C.I.
Area:	J-Away R.	Sample Rate:	1m.	Shot Int.:	10 Sec.
				Reel em:	Rec.

Sheet Number: 14

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
8	173	5	23 July 04	205	19:11:00	Start			
		21			19:13:40	Start	40.427534	-51.409036	17
	173	134			19:32:30	End	40.438732	-51.373478	130
	174	135			19:32:40	Start	40.438834	-51.373182	131
	174	264			19:54:10	End	40.451630	-51.333276	260
	175	265			19:54:20	Start	40.451726	-51.333258	261
	175	394			20:15:00	End	40.464450	-51.293010	390
	176	395			20:16:00	Start	40.464542	-51.292701	391
	176	524			20:37:30	End	40.470935	-51.253380	520
9	174	525			20:37:40	Start	40.470670	-51.253333	521
	177	654			20:54:11	End	40.443523	-51.266172	650
	178	655			20:54:21	Start	40.443313	-51.266280	651
	178	784			21:20:51	End	40.444418	-51.280371	780
	179	785			21:21:01	Start	40.444195	-51.280484	781
	179	914			21:42:31	End	40.385562	-51.294678	910
	180	915			21:42:41	Start	40.385345	-51.294796	911
	180	1044			22:04:11	End	40.357050	-51.308972	1040
	181	1045			22:04:21	Start	40.356839	-51.309079	1041
	181	1174			22:25:51	End	40.328683	-51.322860	1170
	182	1175			22:26:01	Start	40.328463	-51.322975	1171
	182	1304			22:47:31	End	40.300286	-51.356654	1300
	183	1305			22:47:41	Start	40.300172	-51.356758	1301
	183	1434			23:08:11	End	40.272116	-51.350493	1430
	184	1435			23:09:21	Start	40.271902	-51.350599	1431
	184	1564			23:30:51	End	40.244014	-51.324176	1560
	185	1565			23:31:01	Start	40.243808	-51.324289	1561
	185	1694			23:52:31	End	40.216044	-51.374466	1690

Shot #

(\*) No reel # 172) tensioning only #1-16  
 1st shot 40°25'45" N 71°24'54" W  
 No return from 040 Shot #4  
 Possible error Shuttlecock, shot #10, 64  
 Possible Shuttlecock error #438  
 20132 start of turn b/a line 949 (Shot #482)

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 cu in G.I.
Area:	J. Acromy R.	Sample Rate:	1 ms	Shot Int:	10 sec
				Reel en:	8 sec.

Sheet Number: 15

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot	Comments
9	186	1691	23 July 04	205	23:52:41	Start	40.25832	-51.372881	1691	#1739-1748 Possible slatblock error
	186	1824	24 July 2004	206	00:14:11	End	40.188160	-51.391354	1820	
	187	1825			00:14:21	Start	40.187453	-51.391463	1821	
	187	1954			00:35:52	End	40.160403	-51.404847	1950	
	188	1955			00:36:02	Start	40.160184	-51.404942	1951	
	188	2084			00:57:32	End	40.132483	-51.418421	2080	
	189	2085			00:57:42	Start	40.132274	-51.418536	2081	
	189	2214			01:19:12	End	40.104721	-51.431459	2210	
	190	2215			01:19:22	Start	40.104502	-51.432039	2211	* 2276 No return from 040.
	190	2345			01:41:02	End	40.076592	-51.445549	2340	
	191	2346			01:41:12	Start	40.076391	-51.445652	2341	
	191	2475			02:02:42	End	40.048681	-51.459113	2470	
	192	2476			02:02:52	Start	40.048466	-51.459211	2471	02:13:02 slat #19532 Start from 6/10
	192	2605			02:24:22	End	40.029556	-51.483906	2600	Line 9 & Line 10 For #9
10	193	2606			02:24:32	Start	40.029448	-51.484199	2601	
	193	2735			02:46:02	End	40.013099	-51.516796	2730	
	194	2736			02:46:12	Start	40.013099	-51.516893	2731	2807- Possible
	194	2865			03:07:42	End	40.003033	-51.550710	2860	
	195	2866			03:07:52	Start	40.003033	-51.550977	2861	
	195	2995			03:29:12	End	39.989143	-51.584834	2990	
	196	2996			03:29:13	Start	39.989005	-51.585082	2991	3041 0344Z
	196	3125			03:51:02	End	39.928034	-51.618323	3120	
	197	3126			03:51:12	Start	39.927972	-51.618420	3121	
	197	3255			04:12:42	End	39.971206	-51.654628	3250	
	198	3256			04:12:52	Start	39.921158	-51.654298	3251	
	198	3385			04:34:22	End	39.964520	-51.689269	3380	
	199	3386			04:34:32	Start	39.964220	-51.690044	3381	*
	199	3516			04:56:12	End	39.957365	-51.705920	3510	

\* 04:38:32 No return from 040 at shot 3410.

error slatblock

\* Shots 21689-3706 Ship should have to gyrocompass problem in ER.

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	144-61	Channels:	48	Source:	25/75 sec 61
Area:	T-kenedy R	Sample Rate:	1 sec	Shot Int:	10 sec
		Reel len:	8 sec		

Sheet Number: 16

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
10	200	3517	24 July '64	206	4:56:22	Start	39.952318	-51.726190	3511 SW 7168, 506 < 4.8 knots.
	200	3646	"	"	5:12:51	End	39.950825	-51.761244	3640
	201	3647			5:18:00	Start	39.950521	-51.761541	3641 *
	201	3776			5:34:31	End	39.946391	-51.787584	3770
	202	3777			5:39:41	Start	39.946327	-51.787813	3771
	202	3906			6:01:11	End	39.940445	-51.817175	3900
	203	3907			6:01:21	Start	39.940413	-51.817443	3901
	203	4036			6:22:51	End	39.936023	-51.850242	4030
	204	4037			6:23:01	Start	39.935985	-51.850597	4031
	204	4166			6:44:31	End	39.932166	-51.883440	4160 EOL 10 SL 4147
11	205	4167			6:44:41	Start	39.932229	-51.883728	4161 BOLL 284 4184
	205	4296			7:06:11	End	39.965779	-51.869643	4296
	206	4297			7:06:21	Start	39.966057	-51.881667	4291
	206	4426			7:27:51	End	40.001187	-51.886526	4420 EOL 11 SL 4396
12	207	4427			7:28:01	Start	40.001457	-51.886337	4421
	207	4556			7:49:31	End	40.006384	-51.886568	4550
	208	4557			7:49:41	Start	40.006454	-51.888285	4551 79006 123 5472 5.0 knots.
	208	4686			8:11:11	End	40.012706	-51.810755	4680
	209	4687			8:11:21	Start	40.012813	-51.810434	4681
	209	4816			8:32:51	End	40.018727	-51.772143	4810
	210	4817			8:33:01	Start	40.018765	-51.771844	4811
	210	4946			8:54:32	End	40.025670	-51.735202	4940
	211	4947			8:54:42	Start	40.025329	-51.734939	4941
	211	5076			9:16:12	End	40.033122	-51.700670	5070
	212	5077			9:16:22	Start	40.033273	-51.700415	5071
	212	5206			9:37:52	End	40.038442	-51.663814	5200
	213	5207			9:38:02	Start	40.038536	-51.663560	5201
	213	5336			9:59:32	End	40.043052	-51.628439	5330



KNORR 179-01 Hi Res MCS Tape Log

Cruise: <u>KN 179-01</u>	Channels: <u>48</u>	Source: <u>FS/FS Coin</u>
Area: <u>J-Mountain R</u>	Sample Rate: <u>1 ms</u>	Shot Int.: <u>10 sec</u>
	Reel Len: <u>8 sec</u>	

Sheet Number: 17

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
12	214	5337	24 July 64	206	9:59:42	Start	40.043071	-51.628122	5331
	214	5466			10:21:12	End	40.048046	-51.584422	5460
	215	5467			10:21:22	Start	40.048742	-51.586304	5461
	215	5596			10:42:52	End	40.061524	-51.548252	5590
	216	5597			10:43:02	Start	40.061520	-51.547940	5591
	216	5726			11:04:32	End	40.069435	-51.508774	5720
	217	5727			11:04:42	Start	40.069481	-51.508896	5721
	217	5856			11:26:12	End	40.076799	-51.477104	5850
	218	5857			11:26:22	Start	40.077048	-51.470795	5851
	218	5986			11:47:52	End	40.084370	-51.482327	5980
	219	5987			11:48:02	Start	40.084450	-51.483208	5981
	219	6116			12:09:32	End	40.096005	-51.398335	6110
13	220	6117			12:09:42	Start	40.096246	-51.398245	6111
	220	6246			12:31:12	End	40.118372	-51.419795	6240
	221	6247			12:31:22	Start	40.118553	-51.420110	6244
	221	6377			12:53:02	End	40.141525	-51.444617	6370
	222	6378			12:53:12	Start	40.141700	-51.444811	6371
	222	6507			13:14:42	End	40.164468	-51.469124	6500
	223	6508			13:14:52	Start	40.164462	-51.469807	6501
	223	6637			13:36:22	End	40.187470	-51.493699	6630
13	224	6638			13:36:32	Start	40.187659	-51.498874	6631
	224	6767			13:58:02	End	40.193458	-51.525470	6760
	225	6768			13:58:12	Start	40.193472	-51.525452	6761
	225	6897			14:19:42	End	40.186884	-51.561642	6890
	226	6898			14:19:52	Start	40.186334	-51.561930	6891
	226	7027			14:41:22	End	40.179455	-51.597057	7020
	227	7028			14:41:32	Start	40.179402	-51.597344	7021
	227	7157			15:03:03	End	40.172465	-51.632214	7150

14

1300Z - Data quality poor - noise

1204Z - beginning of turn for line 13

13

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	46171-01	Channels:	48	Source:	35/35 cu. m. G.I.
Area:	Y Arunah R.	Sample Rate:	1 sec.	Shot Int.:	10 sec.
				Reclen:	8 sec.

Sheet Number: 18

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
14	228	7158	24 Jul 2004	201	15:03:13	Start	40.172548	-51.652497	7251	
	228	7282			15:24:43	End	40.165789	-51.666965	7250	
	229	7288			15:24:53	Start	40.165695	-51.667211	7281	
	229	7417			15:46:22	End	40.159277	-51.699839	7410	
	230	7418			15:46:32	Start	40.159219	-51.692219	7411	
	230	7547			16:08:02	End	40.152975	-51.732088	7540	
	231	7548			16:08:12	Start	40.152919	-51.732732	7541	
	231	7677			16:29:42	End	40.146496	-51.765192	7676	
	232	7678			16:29:52	Start	40.146439	-51.765431	7677	
	232	7807			16:51:21	End	40.140152	-51.797609	7800	
	233	7808			16:51:31	Start	40.140100	-51.797856	7801	
	233	7932			17:18:01	End	40.138575	-51.830975	7936	
14/15	234	7938			17:18:11	Start	40.138508	-51.831209	7937	
15	234	8067			17:34:41	End	40.127143	-51.868920	8060	1731 - Start of Line 15
	235	8068			17:34:51	Start	40.12724	-51.866220	8061	
	235	8197			17:56:21	End	40.150801	-51.892832	8190	
	236	8198			17:56:31	Start	40.150486	-51.893035	8191	
	236	8328			18:18:11	End	40.173130	-51.916661	8320	1822 - Gun Shot down
16	237	0001			18:23:42	Start	40.180822	-51.916992	0001	1823 - Gun restarted
	237	130			18:45:13	End	40.197577	-51.887818	130	1823 - Start of Line 16
	238	131			18:45:23	Start	40.197612	-51.887815	131	Possible static code error at start # 35.
	238	260			19:06:53	End	40.203830	-51.850726	260	
	239	261			19:07:03	Start	40.203911	-51.850441	261	Possible static code error * 331389
	239	390			19:28:33	End	40.210075	-51.813606	390	
	240	391			19:28:43	Start	40.210172	-51.813326	391	Possible static code error * 397
	240	520			19:50:13	End	40.228471	-51.795588	520	

File not too large.

# KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 cu in
Area:	J. Anomaly R.	Sample Rate:	1 sec	Shot Int.:	10 sec
					6. I.
					Reclen:
					Sec.

Sheet Number: 19

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
16	241	521	24 Jul 2004	206	19:50:23	Start	40.208525	-51.745285	521	Possible duplicate core # 694
	241	650			20:11:53	End	40.238956	-51.739448	650	
	242	651			20:12:03	Start	40.239040	-51.739154	651	Possible duplicate core # 654, 681
	242	780			20:33:34	End	40.250012	-51.689154	780	
	243	781			20:33:44	Start	40.250098	-51.688951	781	
	243	910			20:55:14	End	40.261774	-51.658499	910	
	244	911			20:55:24	Start	40.261856	-51.658187	911	
	244	1040			21:16:54	End	40.272934	-51.617494	1040	
	245	1041			21:17:04	Start	40.273013	-51.617631	1041	Possible duplicate core # 1147
	245	1170			21:38:34	End	40.283280	-51.574493	1170	
	246	1171			21:38:45	Start	40.283375	-51.574134	1171	
	246	1300			22:00:14	End	40.293629	-51.533261	1300	
	247	1301			22:00:24	Start	40.293709	-51.533695	1301	
	247	1430			22:21:54	End	40.304266	-51.493448	1430	
	248	1431			22:22:04	Start	40.304343	-51.493450	1431	
	248	1560			22:43:34	End	40.314654	-51.458413	1560	
	249	1561			22:43:44	Start	40.314737	-51.458111	1561	
	249	1690			23:05:14	End	40.325178	-51.419602	1690	
	250	1691			23:05:24	Start	40.325256	-51.419301	1691	
	250	1820			23:26:54	End	40.335382	-51.381393	1820	
	251	1821			23:27:04	Start	40.335459	-51.381107	1821	
	251	1950			23:48:34	End	40.345579	-51.343472	1950	
	252	1951			23:48:44	Start	40.345670	-51.343181	1951	
	252	2080	25 Jul 2004	207	20:10:14	End	40.355762	-51.305643	2080	
	253	2081			20:10:24	Start	40.355841	-51.305352	2081	
	253	2159			20:23:24		40.362080	-51.292431	2159	EOC #16 # 2159
	253	2205			20:31:04		40.359889	-51.268529	2205	EOC #17 # 2205
	253	2210			20:31:54	End	40.359365	-51.267441	2210	

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN174-01	Channels:	418	Source:	75/75 sec in G-I
Area:	Is-Aronah R.	Sample Rate:	1 ms.	Shot Int.:	0 sec.
				Reel en:	80 sec

Sheet Number: 20

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
17	254	2211	25 Jul 2001	207	00:32:01	Start	40.357255	-51.246866	2211	
	254	2340			00:53:34	End	40.345626	-51.231235	2340	
	255	2341			00:53:44	Start	40.345519	-51.230957	2341	
	255	2470			01:15:14	End	40.332442	-51.195310	2470	
	256	2471			01:15:24	Start	40.332378	-51.195028	2471	
	256	2600			01:36:54	End	40.319654	-51.160288	2600	
	257	2601			01:37:04	Start	40.319627	-51.160022	2601	
17	257	2618			01:39:54		40.317960	-51.155507	2618	End 17, Shot # 2618
18	257	2667			01:48:04		40.317991	-51.141963	2667	Shot 18, Shot # 2667
	257	2730			01:58:34	End	40.327357	-51.124411	2730	
	258	2731			01:58:44	Start	40.323442	-51.124109	2731	
	258	2860			02:20:14	End	40.334600	-51.086348	2860	
	259	2861			02:20:24	Start	40.334644	-51.086045	2861	
	259	2940			02:41:54	End	40.345910	-51.048194	2940	
	260	2941			02:42:04	Start	40.346016	-51.047914	2941	
	260	3120			03:03:34	End	40.357051	-51.014623	3120	
	261	3121			03:03:44	Start	40.357127	-51.014331	3121	
	261	3250			03:25:14	End	40.368129	-51.978160	3250	
	262	3251			03:25:24	Start	40.368212	-51.972870	3251	
18	262	3380			03:46:53	End	40.374311	-51.935288	3380	
19	263	3381			03:47:03	Start	40.374299	-51.935000	3381	
	263	3510			04:08:33	End	40.388831	-51.908449	3510	Shot 19, Shot # 3510
	264	3511			04:08:43	Start	40.389069	-51.908921	3511	Shot 20, Shot # 3511
	264	3640			04:30:13	End	40.422535	-50.849225	3640	
	265	3641			04:30:23	Start	40.422803	-50.849130	3641	
	265	3770			04:51:54	End	40.456628	-50.889261	3770	
	266	3771			04:52:04	Start	40.456894	-50.889184	3771	
	266	3900			05:13:23	End	40.485466	-50.849357	3900	

KNORR 179-01 Hi Res MCS Tape

Log

Cruise:	Ku179-01	Channels:	48	Source:	75/75 sec 6I
Area:	1 Kennedy R	Sample Rate:	125 sec	Shot Int.:	10 sec
		Reel in:	8 sec		

Sheet Number: 21

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
20	267	3401	25 July 04	207	5:13:44	Start	40.485631	-50.839284	3901
		3456			5:22:53		40.407494	-50.835241	3956 Begin turn at 150L 19
		3474			5:25:45		40.501	-50.8372	3974 End turn at 150L 20
		4030			5:35:14	End	40.502482	-50.857855	4030
267		4030			5:35:14	End	40.502482	-50.857855	4030
268		4031			5:35:23	Start	40.508099	-50.857620	4031
268		4160			5:56:54	End	40.523475	-50.824361	4160
269		4161			5:57:04	Start	40.523592	-50.824111	4161
269		4290			6:18:34	End	40.538817	-50.791177	4290
270		4291			6:18:44	Start	40.539202	-50.790910	4291 4321 possible error/slot clock
270		4420			6:40:14	End	40.554727	-50.752448	4420
271		4421			6:40:24	Start	40.554955	-50.752163	4421
271		4550			7:01:54	End	40.570745	-50.723852	4550
272		4551			7:02:04	Start	40.570938	-50.723639	4551
272		4680			7:23:34	End	40.587039	-50.696153	4680
273		4681			7:23:44	Start	40.587166	-50.696993	4681
273		4810			7:45:14	End	40.603376	-50.656356	4810
274		4811			7:45:24	Start	40.603503	-50.656098	4811
274		4940			8:06:54	End	40.622003	-50.622242	4940
275		4941			8:07:04	Start	40.622135	-50.622992	4941
275		5070			8:28:34	End	40.636365	-50.588851	5070
276		5071			8:28:44	Start	40.636488	-50.588605	5071
276		5200			8:50:14	End	40.652634	-50.555744	5200
277		5201			8:50:24	Start	40.652705	-50.555484	5201
277		5330			9:11:55	End	40.668392	-50.523585	5330
278		5331			9:12:05	Start	40.668510	-50.523244	5331
278		5460			9:33:35	End	40.683638	-50.492525	5460
279		5461			9:33:45	Start	40.683745	-50.492287	5461
279		5590			9:55:15	End	40.698302	-50.462446	5590

KNORR 179-01 HI Res MCS Tape Log

Cruise: <u>Km 174-01</u>	Channels: <u>48</u>	Source: <u>75/45 GAT</u>
Area: <u>5-Monoway R</u>	Sample Rate: <u>1 sec</u>	Shot Int.: <u>10 sec</u>
	Reel: <u>8 sec</u>	

Sheet Number: 22

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
20	280	5591	25 July 64	207	04:55:25	S	40.68468	-50.462227	
	280	5720			04:55:55	E	40.713176	-50.42996	5720
	281	5721			04:57:04	S	40.713293	-50.424768	5721
	281	5850			04:58:35	E	40.728300	-50.400346	5850
	282	5851			04:59:45	S	40.728828	-50.400135	5851
	282	5980			04:00:15	E	40.744761	-50.367250	5980
	283	5981			04:00:25	S	40.744848	-50.367251	5981
	283	6110			04:21:55	E	40.740659	-50.335219	6110
	284	6111			04:22:05	S	40.740775	-50.334967	6111
	284	6240			04:48:34	E	40.776889	-50.302476	6240
	285	6241			04:48:44	S	40.776700	-50.302226	6241
	285	6370			04:08:14	E	40.792508	-50.269710	6370
	286	6371			04:08:24	S	40.792736	-50.269464	6371
	286	6500			04:26:54	E	40.808434	-50.237202	6500
	287	6501			04:27:04	S	40.808555	-50.236992	6501
	287	6630			04:48:34	E	40.824496	-50.204286	6630
	288	6631			04:48:44	S	40.824612	-50.204029	6631
	288	6760			04:10:14	E	40.840665	-50.171112	6760
	289	6761			04:10:24	S	40.840787	-50.170855	6761
	289	6890			04:31:54	E	40.856891	-50.137967	6890
	290	6891			04:32:04	S	40.857023	-50.137715	6891
	290	7020			04:53:34	E	40.873584	-50.104122	7020
	291	7021			04:54:44	S	40.873495	-50.103853	7021
	291	7150			04:15:13	E	40.889781	-50.070136	7150
	292	7151			04:15:23	S	40.889916	-50.069876	7151
	292	7280			04:36:53	E	40.906119	-50.036746	7280
	293	7281			04:37:03	S	40.906248	-50.036516	7281
	293	7410			04:58:34	E	40.922047	-50.004187	7410

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KNH9-01	Channels:	48	Source:	75/75 cu in
Area:	5-Armory	Sample Rate:	1 ms	Shot Int.:	10 sec
				Reclen:	8 sec

Sheet Number: 23

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
20	294	7411	25 Jun '04	207	14:58:44	Start	40.972171	-50.003937	7411
	294	7540			15:20:14	End	40.937788	-49.971630	2540
	295	7541			15:20:24	Start	40.9377913	-49.971573	7541
	295	7670			15:41:54	End	40.953595	-49.939024	7670
	296	7671			15:42:04	Start	40.953709	-49.938354	7671
	296	7800			16:03:34	End	40.969636	-49.906349	7800
	297	7801			16:03:44	Start	40.969760	-49.906101	7801
	297	7930			16:25:14	End	40.985514	-49.87342	7930
	298	7931			16:25:24	Start	40.985621	-49.873408	7931
	298	8060			16:46:54	End	41.001792	-49.841613	8060
	299	8061			16:47:04	Start	41.001419	-49.840752	8061
	299	8190			17:08:34	End	41.017282	-49.802432	8190
	300	8191			17:08:44	Start	41.017406	-49.802187	8191
	300	8320			17:30:14	End	41.035288	-49.775358	8320
	301	8321			17:30:24	Start	41.033412	-49.775080	8321
	301	8450			17:51:54	End	41.049535	-49.742089	8450
	302	8451			17:52:04	Start	41.049659	-49.741838	8451
	302	8580			18:13:34	End	41.065630	-49.708227	8580
	303	8581			18:13:44	Start	41.065748	-49.708554	8581
	303	8710			18:35:14	End	41.081794	-49.675490	8710
	304	8711			18:35:24	Start	41.081918	-49.675235	8711
	304	8840			18:56:55	End	41.097680	-49.642734	8840
	305	8841			18:57:05	Start	41.097802	-49.642802	8841
	305	8970			19:18:35	End	41.113743	-49.605645	8970
	306	8971			19:18:45	Start	41.113909	-49.605390	8971
	306	9100			19:40:15	End	41.150003	-49.576311	9100
	307	9101			19:40:25	Start	41.130128	-49.576045	9101
	307	9137			19:46:25		41.134597	-49.566894	9137 Break off line to start to cycle end of

KNORR 179-01 Hi Res MCS Tape

Log

Sheet Number: 24

Cruise:	KN179-01	Channels:	48	Source:	51/35 cm. i.a. L.T.
Area:	SEA to SE	Sample Rate:	1 ms.	Shot Int.:	10 Sec.
SEA to SE, Northward Lead R2, 2000 ft. track					
Line #	Reel #	File #	Date	JD	Time

20	307	9161	25 July 04	207	19:50:25	End	41.132527	-49.561055	9161	Turn off to cycle Start #1 in turn
20	308	1			19:55:04	Start	41.128799	-49.569542	1	Turn on, still in turn
	308	130			20:16:34	E	41.119858	-49.579034	130	Possible shotlock error #66
	309	131			20:16:44	S	41.120088	-49.579014	131	
	309	187			20:26:14		41.125534	-49.586233	187	Ship back online
	309	260			20:38:14	E	41.134007	-49.588212	260	
	310	261			20:38:24	S	41.134120	-49.589355	261	
	310	390			20:55:54	End	41.149880	-49.535517	390	
	311	391			21:00:04	Start	41.150008	-49.535259	391	
	311	520			21:21:35	E	41.165784	-49.502466	520	
	312	521			21:21:45	S	41.165906	-49.502418	521	Possible shotlock error #567
	312	650			21:43:15	E	41.181647	-49.469901	650	
	313	651			21:43:25	S	41.181749	-49.469657	651	
	313	780			22:04:55	E	41.197464	-49.437053	780	
	314	781			22:05:05	S	41.197591	-49.437002	781	
	314	910			22:26:35	E	41.213589	-49.404074	910	
	315	911			22:26:45	S	41.213694	-49.405812	911	
	315	1040			22:48:15	E	41.229801	-49.370702	1040	
	316	1041			22:48:25	S	41.229921	-49.370456	1041	
	316	1170			23:09:54	E	41.246014	-49.337462	1170	
	317	1171			23:10:04	S	41.246130	-49.336913	1171	
	317	1300			23:31:34	E	41.262200	-49.303656	1300	
	318	1301			23:31:44	S	41.262316	-49.303417	1301	
	318	1430			23:53:14	E	41.279464	-49.270152	1430	
	319	1431			23:53:24	S	41.279594	-49.269894	1431	
	319	1560	26 July 04	708	00:14:54	E	41.294661	-49.236676	1560	
	320	1561			00:15:04	S	41.294786	-49.236375	1561	
	320	1690			00:36:34	E	41.310869	-49.205118	1690	



3 x 60 = 180 shots / hr  
300

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channel:	48	Source:	35/35 cu in G.I.
Area:		Sample Rate:	1 sec	Shot Int:	10 sec.

Sheet Number: 25

T-A to SE. Neosho/Land Ridge trail										
Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
20	321	1691	22 July '04	208	00:36:44	Shift	41.311000	-49.202853	1691	
	321	1820			00:58:14	Ewd	41.327034	-49.169671	1820	
	322	1821			00:58:24	Shift	41.327164	-49.169411	1821	
	322	1950			01:11:54	E	41.343136	-49.136596	1950	
	323	1951			01:20:04	S	41.349254	-49.136335	1951	
	325	2080			01:41:34	E	41.357673	-49.107640	2080	
	324	2081			01:41:44	S	41.359194	-49.103438	2081	
	324	2210			02:10:51	E	41.374944	-49.070684	2210	
	325	2211			02:03:24	S	41.375128	-49.070435	2211	
	325	2340			02:24:54	E	41.391230	-49.037032	2340	
	326	2341			02:25:04	S	41.391357	-49.036735	2341	
	326	2470			02:46:34	E	41.407507	-49.003462	2470	
	327	2471			02:46:44	S	41.407635	-49.003194	2471	
	327	2600			03:08:14	E	41.423244	-49.969857	2600	
	328	2601			03:08:24	S	41.423925	-49.969606	2601	
	328	2730			03:24:54	E	41.440682	-49.926070	2730	
	329	2731			03:20:04	S	41.440207	-49.935823	2731	
	329	2860			03:51:34	E	41.452188	-48.902753	2860	
	330	2861			03:51:44	S	41.452321	-48.902321	2861	
	330	2990			04:13:14	E	41.472440	-48.868442	2990	
	331	2991			04:13:24	S	41.472532	-48.868182	2991	
	331	3120			04:34:54	E	41.488641	-48.835332	3120	
	332	3121			04:35:04	S	41.488815	-48.835049	3121	
	332	3250			04:56:34	E	41.504842	-48.801323	3250	
	333	3251			04:56:44	S	41.504963	-48.801474	3251	
	333	3380			05:18:15	E	41.521060	-48.768080	3380	
	334	3381			05:18:25	S	41.521186	-48.767939	3381	
	334	3510			05:29:55	E	41.537336	-48.734392	3510	

KNORR 179-01 Hi Res MCS Tape Log

Cruiser:	K0179-01	Channels:	48	Source:	75/75 sec. G.I
Area:	5 sec. new	Sample Rate:	1 sec	Shot Int.:	10 sec
				Reel in:	8 sec

Sheet Number: 26

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
20	335	3511	26 July 04	208	05:40:05	S	41.537456	-48.734135	3511
		3557			05:51:04		41.545677	-48.712093	3572
		3630			05:58:55		41.557324	-48.712606	3630
20	335	3640			06:01:35	E	41.557074	-48.714248	3640
21	336	3641			06:01:45	S	41.557804	-48.714563	3641
	336	3776			06:23:15	E	41.583127	-48.735494	3770
	337	3771			06:23:25	S	41.583336	-48.735649	3771
	337	3800			06:44:55	E	41.609125	-48.782451	3800
	338	3801			06:45:05	S	41.609314	-48.782112	3801
	338	4030			07:06:35	E	41.633960	-48.777437	4030
	339	4031			07:06:45	S	41.634155	-48.778084	4031
	340	4160			07:28:15	E	41.658670	-48.748764	4160
	340	4161			07:28:25	S	41.658854	-48.748932	4161
21	340	4290			07:49:55	E	41.683292	-48.819322	4290
22	341	4291			07:50:05	S	41.683494	-48.819473	4291
		4246			07:59:15		41.643885	-48.828190	
		4389			08:06:25		41.646096	-48.839791	
		4400			08:08				
	341	4420			08:11:35	E	41.682195	-48.847708	4420
	342	4421			08:11:45	S	41.682077	-48.847955	4421
	342	4556			08:33:15	E	41.676362	-48.880857	4456
	343	4551			08:33:25	S	41.676245	-48.881104	4551
	343	4680			08:54:55	E	41.660610	-48.919131	4680
	344	4681			08:55:05	S	41.660498	-48.919380	4681
	344	4810			09:16:36	E	41.645034	-48.944078	4810
	345	4811			09:16:46	S	41.644914	-48.944322	4811
	345	4940			09:38:15	E	41.678932	-48.981688	4940

EOC 21 Begin Turn to Port (w)  
EOC 22 on New Course 2370  
QM to star, Traction to port.

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	25/45 cels
Area:	562202202	Sample Rate:	1245	Shot Int.:	10 Sec
				Reel len:	61
					8 sec

Sheet Number: 27

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
22a	346	4941	26 July 04	208	03:38:25	S	41.028821	-48.981558	
	346	5070			01:54:55	E	41.643127	-48.014416	5070
	347	5071			02:00:05	S	41.633004	-48.04864	5071
	347	5200			02:21:34	E	41.597317	-49.048006	5200
	348	5201			02:21:44	S	41.597191	-49.048252	5201
	348	5330			03:43:14	E	41.581401	-49.081324	5330
	349	5331			03:43:24	S	41.581286	-49.081526	5331
	349	5460			04:04:53	E	41.565552	-49.114758	5460
	350	5461			04:05:03	S	41.565435	-49.115018	5461
		5497			11:11:04		41.560972	-49.124167	5497 Compressor being turned off, begin turn off line to recover gear
		5533			11:17:04		41.559916	-49.130886	turn off 5533
	350	5590			11:26:34	End	41.546265	-49.121148	5590
22b	351	1	27 July 04	209	00:33:00	S	41.571657	-49.103179	13 reel for coring ops
		31			00:38:55		41.567919	-49.110857	31 Airl stat, approaching turn off point
		76			00:46:05		41.561917	-49.122250	76 Airl stat after waypoint, line 22 resumes
	351	130			00:55:05		41.555185	-49.126397	130
	352	131			00:55:15		41.555058	-49.136463	131
	352	260			01:16:45		41.539661	-49.170357	260
	353	261			01:16:55		41.539941	-49.170620	261
	353	390			01:28:25		41.532552	-49.204295	390
	354	391			01:39:35		41.523437	-49.204555	391
	354	492			01:55:25		41.510967	-49.230477	492 Compressor overheating, gear off, in. fast turn to stbd.

KNORR 179-01 HI Res MCS Tape Log

Cruise:	KAL179-01	Channels:	48	Source:	76/75 sec in GI
Area:	Seamounts	Sample Rate:	1ms	Shot Int.:	10 Sec
				Reel on:	8 Sec

Sheet Number: 28

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
22c	355	2	22 July	209	05:14:52	S			1st oxygen slant ship in turn off line.
		90			05:20:42				Ship back on line NE of break pt.
		103			05:31:52				streamer quiet 230° 4.5 kts.
		122			05:35:02		41.510449	-49.230276	At next off pt.
355		130			05:36:22	E	41.509560	-49.232449	
356		131			05:36:32	S	41.509452	-49.232845	
356		260			05:58:02	E	41.494735	-49.265286	240
357		261			05:58:12	S	41.494465	-49.265338	261
357		390			06:19:42	E	41.424080	-49.247330	340
358		391			06:19:52	S	41.424952	-49.249577	341
358		520			06:41:22	E	41.463852	-49.329737	520 7 shots missing from tapes
359		528			06:42:42	S	41.46212	-49.34425	521 1 min 10 sec missing, shot corrected
359		657			07:04:12	E	41.447431	-49.363880	657
360		658			07:04:22	S	41.447311	-49.364118	658
360		787			07:25:52	E	41.431925	-49.346345	787
361		788			07:26:02	S	41.431800	-49.346345	788
361		917			07:47:32	E	41.416472	-49.428819	917
362		918			07:47:42	S	41.416299	-49.429067	918
362		1047			08:09:12	E	41.400888	-49.461282	1047
363		1048			08:09:22	S	41.400762	-49.461536	1048
363		1177			08:30:52	E	41.385407	-49.443282	1177
364		1178			08:31:02	S	41.385296	-49.444030	1178
364		1307			08:52:32	E	41.364472	-49.524211	1307
365		1308			08:52:42	S	41.364849	-49.524448	1308
365		1437			09:14:12	E	41.354456	-49.558661	1437
366		1438			09:14:22	S	41.354339	-49.558906	1438
366		1567			09:35:52	E	41.328964	-49.591048	1567

KNORR 179-01 Hi Res MCS Tape

Log

Cruise:	KN174-01	Channels:	48	Source:	75/75 G.T
Area:	Seamounts	Sample Rate:	1 m.s	Shot Int.:	10 sec
				Reel en:	8 sec

Sheet Number: 29

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
22c	367	1568	27 July	209	9:36:02	S	41.338840	-49.591343	1548
	367	1697			9:57:32	E	41.323334	-49.623753	1697
	368	1698			9:57:42	S	41.323206	-49.624008	1698
	369	1827			10:14:11	E	41.307655	-49.656548	1827
	369	1828			10:14:21	S	41.307524	-49.656808	1828
	369	1457			10:40:51	E	41.291985	-49.687343	1957
	370	1958			10:41:01	S	41.291860	-49.689638	1958
	370	2087			11:02:30	end	41.276353	-49.722072	2087
	371	2088			11:02:40	8sec	41.276235	-49.722330	2088
	371	2217			11:24:10	end	41.260836	-49.754554	2217
	372	2286			11:24:20	8sec	41.260717	-49.754801	2218
	372	2347			11:48:51	end	41.248244	-49.787160	2347
	373	2428			11:46:00	8sec	41.245126	-49.787410	2348
	373	2477			12:07:31	end	41.229735	-49.819508	2477
	374	2478			12:07:41	8sec	41.229619	-49.819810	2478
	374	2607			12:29:11	end	41.214186	-49.852156	2607
	375	2608			12:29:21	8sec	41.214015	-49.852409	2608
	375	2738			12:51:01	end	41.198351	-49.824658	2737
	376	2739			12:51:11	8sec	41.198220	-49.824901	2738
	376	2868			13:12:41	end	41.185599	-49.917653	2867
23	377	2869			13:12:51	8sec	41.185884	-49.917929	2868
	377	2999			13:34:21	end	41.209020	-49.939902	2997
	378	3128			13:34:31	8sec	41.209207	-49.940072	2998
	379	3129			13:56:01	end	41.233293	-49.960865	3127
	379	3258			13:56:11	8sec	41.233464	-49.961022	3128
	380	3259			14:17:41	end	41.257598	-49.981876	3257
	380	3387			14:17:51	8sec	41.257981	-49.982033	3258
	380	3388			14:37:21	end	41.281731	-50.007177	3387

1806Z EOL 22c (last of Turn)  
1316Z EOL 23 (end of Turn)



KNORR 179-01 Hi Res MCS Tape

Log

Sheet Number: 31

Cruise:	KN179-01	Channels:	48	Source:	75/75 w.d. 6 J.
Area:	SE Newfy	Sample Rate:	1 ms.	Shot Int.:	1 sec.
Seamark				Reel en:	8 sec.

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
24	393	1301	27 July 04	209	4:54:51	S	41.458539	-49.744043	1301	
	393	1430			20:16:21	E	41.474895	-49.70763	1430	
	394	1431			20:16:31	S	41.475030	-49.710506	1431	
	394	1560			20:38:01	E	41.491400	-49.676026	1560	
	395	1561			20:38:01	S	41.491525	-49.676265	1561	
	395	1690			20:54:41	E	41.507838	-49.643284	1690	
	396	1691			20:54:57	S	41.507961	-49.643019	1691	
	396	1820			21:21:21	E	41.539256	-49.604872	1820	
	397	1821			21:21:31	S	41.539373	-49.604619	1821	
	397	1950			21:43:01	E	41.540559	-49.572322	1950	
	398	1951			21:43:11	S	41.540692	-49.572061	1951	
	398	2079			22:04:32	E	41.557001	-49.542977	2079	
	399	2080			22:04:42	S	41.557131	-49.542714	2080	
	399	2210			22:26:12	E	41.573495	-49.508986	2210	
	400	2211			22:26:32	S	41.573615	-49.508728	2211	
	400	2340			22:48:02	E	41.589123	-49.475491	2340	
	401	2341			22:48:12	S	41.590044	-49.475229	2341	
	401	2470			23:09:42	E	41.606492	-49.441619	2470	
	402	2471			23:09:52	S	41.606615	-49.441383	2471	
	402	2600			23:31:22	E	41.622985	-49.407394	2600	
	403	2601			23:31:32	S	41.623119	-49.407526	2601	
	403	2730			23:53:02	E	41.639500	-49.373953	2730	
	404	2731			23:53:12	S	41.639684	-49.373697	2731	
	404	2860	28 July 04	210	00:14:42	E	41.656060	-49.339495	2860	
	405	2861			00:14:52	S	41.656180	-49.339720	2861	
	405	2990			00:36:22	E	41.672593	-49.306071	2990	
	406	2991			00:36:32	S	41.672705	-49.305810	2991	
	406	3120			00:58:02	E	41.688134	-49.271882	3120	

KNORR	179-01	Hi Res	MCS	Tape
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Log

Cruise:	KN179-01	Channels:	48	Source:	RS/FS c.u. in.	GE
Area:	S. E. Nesh	Sample Rate:	1 ms.	Shot Int.:	10 sec.	
				Reclen:	8 sec.	

Sheet Number: 32

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Start #	Comments
24	407	3121	28 Jun 04	210	00:58:12	S	41.689248	-49.271629	3121	
	407	3250			01:14:43	E	41.705909	-49.237891	3250	
	408	3251			01:14:53	S	41.706047	-49.237698	3251	
	408	3380			01:41:23	E	41.722516	-49.203469	3380	
	409	3381			01:41:37	S	41.722624	-49.203402	3381	
	409	3510			02:03:03	E	41.739492	-49.169442	3510	
	410	3511			02:03:13	S	41.739300	-49.169229	3511	
	410	3640			02:24:43	E	41.755855	-49.135301	3640	End #24, start turn
25	411	3641			02:24:53	S	41.755985	-49.135050	3641	
		3715			02:37:13		41.746292	-49.118855	3715	Sol #25
	411	3720			02:46:23	E	41.735346	-49.109968		
	412	3771			02:46:33	S	41.735713	-49.109812		
	412	3800			05:08:03	E	41.710814	-49.087058	3800	
	413	3901			05:08:13	S	41.710630	-49.086892	3901	
	413	4030			05:29:43	E	41.686704	-49.04588	4030	
	414	4031			05:29:53	S	41.686536	-49.04596	4031	
	414	4160			05:51:23	E	41.662658	-49.042221	4160	
	415	4161			05:51:33	S	41.662472	-49.042080	4161	
	415	4290			04:13:03	E	41.638565	-49.019660	4290	
	416	4291			04:13:13	S	41.638371	-49.019491	4291	
	416	4420			04:34:43	E	41.614304	-48.996379	4420	
	417	4421			04:34:53	S	41.614139	-48.996686	4421	
	417	4550			04:56:23	E	41.591012	-48.972055	4550	
	418	4551			04:56:23	S	41.590824	-48.971882	4551	4571 start date error
	418	4680			05:18:03	E	41.567826	-48.942743	4680	
	419	4681			05:18:13	S	41.567651	-48.942553	4681	
	419	4810			05:39:43	E	41.544803	-48.923717	4810	constant stop date error



KNORR 179-01 Hi Res MCS Tape

Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 bin - GT
Area:	SENR	Sample Rate:	1243	Shot Int.:	10 sec
	360 Hours			Reel en:	8 sec

Sheet Number: 33

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
25	420	44811	28 July	210	05:29:53	S	41.544625	-48.723531	4811
	420	4440			6:01:23	E	41.521743	-48.849612	4940
	421	4941			6:01:33	S	41.521620	-48.849423	4941
	421	5070			6:23:03	E	41.448736	-48.875345	5070
	422	5071			6:23:13	S	41.448562	-48.875155	5071
	422	5200			6:44:43	E	41.475546	-48.85073	5200
	423	5201			6:44:53	S	41.475365	-48.850904	5201
	423	5330			7:06:23	E	41.452870	-48.827270	5330
	424	5331			7:07:33	S	41.452603	-48.827088	5331
	424	5460			7:28:03	E	41.430372	-48.803725	5460
	425	5461			7:28:13	S	41.430205	-48.803551	5461
	425	5590			7:44:43	E	41.407915	-48.766203	5590
	426	5591			7:49:53	S	41.407745	-48.766086	5591
	426	5720			8:11:22	E	41.3854	-48.7567	5720
	427	5721			8:11:32	S	41.3852	-48.7565	5721
	427	5850			8:33:03	E	41.3631	-48.7351	5850
	428	5851			8:33:12	S	41.3629	-48.7350	5851
	428	5980			8:54:42	E	41.34062	-48.70968	5980
	429	5981			8:54:52	S	41.34050	-48.70950	5981
	429	6110			9:16:22	E	41.3184	-48.6863	6110
	430	6111			9:16:32	S	41.3182	-48.6861	6111
	430	6240			9:38:02	E	41.2959	-48.6629	6240
	431	6241			9:38:12	S	41.2957	-48.6627	6241
		6340			9:54:42				EOC 25 Begin turn forward
		6359			9:57:52				EOC 26 Skipper Count, Streamer moving.
25	431	6370			9:54:42	E	41.2722	-48.6458	6370
26	432	6371			9:59:52	S	41.2721	-48.6460	6371
		6380			10:01:22				Streamer quiet

KNORR 179-01 HI Res MCS Tape

Log

Cruise:	KN179-01	Channels:	48	Source:	F5/F75 coin GI
Area:	SEAD	Sample Rate:	1 us	Shot Int.:	10 sec
	Stations			Reel on:	8 sec

Sheet Number: 34

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
26	432	6500	28 July	210	16:21:23	E	41.2580	-49.6765	6500
	433	6501			16:21:33	S	41.2578	-49.6767	6501
	433	6630			16:43:03	E	41.2419	-49.7092	6630
	434	6631			16:43:13	S	41.2418	-49.7094	6631
	434	6760			17:04:42	E	41.225806	-49.742193	6760
	435	6761			17:04:52	S	41.225692	-49.742426	6761
	435	6890			17:26:29	E	41.209647	-49.77537	6890
	436	6891			17:26:32	S	41.209535	-49.775647	6891
	436	7020			17:48:02	E	41.193257	-49.808934	7020
	437	7021			17:48:12	S	41.193129	-49.809186	7021
	437	7131			17:06	E	41.181252	-49.838183	7131 1206 Z - EOL Line 26
	437	7151			17:09:43	E	41.182944	-49.843188	7151
	438	7166			17:12	E	41.185638	-49.846161	7166 1212 Z - SOL Line 27
	439	7280			17:31:23	E	41.206573	-49.866100	7280
	439	7281			17:31:33	S	41.206764	-49.866288	7281
	439	7410			17:53:03	E	41.231039	-49.889091	7410
	440	7411			17:53:13	S	41.231222	-49.889262	7411
	440	7541			18:14:53	E	41.255741	-49.91117	7540
	441	7542			18:15:03	S	41.255932	-49.9113	7541
	441	7671			18:36:33	E	41.280191	-49.935258	7670
	442	7672			18:36:43	S	41.280379	-49.935467	7671
	442	7801			18:58:14	E	41.304639	-49.958272	7800
	443	7802			18:58:24	S	41.304854	-49.958462	7801
	443	7931			19:19:53	E	41.329120	-49.981250	7930
	444	7932			19:20:03	S	41.329292	-49.981433	7931
	444	8061			19:41:33	E	41.353424	-49.004097	8060
	445	8062			19:41:42	S	41.353608	-49.004230	8061

KNORR 179-01 Hi Res MCS Tape

Log

Sheet Number: 35

Cruise:	KN-179-01	Channels:	48	Source:	75/75 sec in 6-E
Area:	SENR	Sample Rate:	1m3	Shot Int.:	10 sec
	Seamounts			Reclen:	8 sec

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot	Comments
27	445	8191	28 July	210	5:03:13	E	41.377874	-49.024167	8190	
	446	8192			5:03:23	S	41.378063	-49.027355	8191	
	446	8270			5:16:24	E	41.392744	-49.041176	8269	Turning off line for compressor work.
	447	1			5:35:37	S	41.384280	-49.044988	1	Reclen - not yet firing - Control of guns
	447									10.00.00.00
	447	44			5:46:10		41.391065	-49.012941		Back on line - webbing around rearm
	447	45			5:46:47		41.391269	-49.042321		Firing guns. Shot 45
	447	54			5:48:15		41.392511	-49.044467		Through weypoint. Shot 54
	447	120			6:00:57	E	41.405075	-49.057368	130	
	448	131			6:01:07	S	41.408308	-49.057572	131	
	448	260			6:22:37	E	41.4134067	-49.080372	260	
	449	261			6:22:47	S	41.4134266	-49.080540	261	
	449	390			6:44:17	E	41.458458	-49.103767	390	
	450	391			6:44:27	S	41.458852	-49.103940	391	
	450	520			7:05:59	E	41.483327	-49.126869	520	
	451	521			7:06:07	S	41.483510	-49.127080	521	
	451	651			7:27:47	E	41.509166	-49.150372	650	Shot 55 missed
	452	652			7:27:57	S	41.508357	-49.150464	651	
	452	781			7:49:27	E	41.532726	-49.173316	780	
	453	782			7:49:37	S	41.532911	-49.173485	781	
	453	911			8:11:07	E	41.557385	-49.196625	910	
	454	912			8:11:17	S	41.557588	-49.196798	911	
	454	1041			8:32:47	E	41.582298	-49.220015	1040	
	455	1042			8:32:57	S	41.582499	-49.220202	1041	
	455	1171			8:54:27	E	41.607071	-49.249310	1170	
	456	1172			8:54:37	S	41.607260	-49.249500	1171	
	456	1301			9:16:06	E	41.632009	-49.266847	1300	

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 c/min	C.I.
Area:	SENR	Sample Rate:	1 ms.	Shot Int:	10 sec	

Sheet Number: 36

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
27	457	1302	28 July 64	210	19:16:16	S	41.632209	-49.267065	1301	
	457	1431			19:37:46	E	41.656876	-49.290209	1430	
	458	1432			19:37:52	S	41.657068	-49.290452	1431	
	458	1544			19:57:20	E	41.679362	-49.311467	1549	
27	459	1	29 July 64	211	01:09:39	S	41.662197	-49.282187	1	begin only 1-12
		13			02:00:34		41.663138	-49.295091	13	1st good shot on line but not at laypoint yet.
		78			02:11:24		41.674922	-49.309019	77	crossing laypoint, no return from C/O #77
		103			02:15:34		41.679409	-49.311435	102	* clear to laypoint as recorded earlier
	459	131			02:20:15	E	41.684697	-49.316371	130	
	460	132			02:20:25	S	41.684999	-49.316559	131	
	460	261			02:44:55	E	41.709570	-49.379921	260	
	461	262			02:42:05	S	41.709766	-49.340097	261	
	461	391			3:03:35	E	41.733627	-49.32668	390	
	462	392			3:03:45	S	41.73386	-49.32286	391	
	462	501			3:25:15	E	41.75836	-49.38603	500	
	463	522			3:25:25	S	41.75851	-49.38602	521	
		622			3:42:04		41.77695	-49.40365	621	Begin turn, EOL 27
27	463	651			3:46:54	E	41.78034	-49.4075	650	
28	464	652			3:47:04	S	41.78041	-49.41104	651	
		674			3:50:44	E	41.79963	-49.41753	673	End turn, BOL 28
	464	781			4:08:34	S	41.76720	-49.44518	780	
	465	782			4:08:44	S	41.76709	-49.44544	781	
	465	911			4:30:14	E	41.75165	-49.47873	910	
	466	912			4:30:24	S	41.75163	-49.47898	911	
	466	1041			4:51:53	E	41.72607	-49.51276	1040	
	462	1042			4:52:03	S	41.73595	-49.51303	1041	
	462	1171			5:13:33	E	41.72091	-49.54665	1170	

DREDDGE

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 sec in 6I
Area:	SENR	Sample Rate:	1 sec	Shot Int:	10 sec
				Reclen:	8 sec

Sheet Number: 37

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
28	468	1172	29 July 64	211	05:13:43	S	41.72029	-49.54691	1171
	468	1301			05:35:13	E	41.70477	-49.58077	1300
	469	1302			05:35:23	S	41.70465	-49.58103	1301
		1405			05:52:33		41.69242	-49.60752	1404
28	469	1431			05:56:53	E	41.68742	-49.61145	1430
29	470	1432			05:57:03	S	41.68725	-49.61149	1431
		1453			06:00:33		41.68282	-49.61044	1452
	470	1561			06:18:33	E	41.66347	-49.59185	1560
	471	1562			06:18:43	S	41.66350	-49.59166	1561
	471	1691			06:40:14	E	41.64020	-49.56698	1690
	472	1692			06:40:24	S	41.64003	-49.56682	1691
	472	1821			07:01:54	E	41.61594	-49.54530	1820
	473	1822			07:02:04	S	41.61577	-49.54530	1821
	473	1951			07:23:34	E	41.59190	-49.52165	1950
	474	1952			07:23:44	S	41.59171	-49.52148	1951
	474	2081			07:45:14	E	41.56806	-49.49831	2080
	475	2082			07:45:24	S	41.56887	-49.49814	2081
	475	2211			08:06:54	E	41.54424	-49.47494	2210
	476	2212			08:07:04	S	41.54406	-49.47478	2211
	476	2341			08:28:34	E	41.52068	-49.45198	2340
	477	2342			08:28:44	S	41.52051	-49.45179	2341
	477	2471			08:50:14	E	41.49720	-49.42894	2470
	478	2472			08:50:24	S	41.49702	-49.42878	2471
	478	2601			09:11:54	E	41.47386	-49.40618	2600
	479	2602			09:12:04	S	41.47368	-49.40603	2601
	479	2731			09:33:34	E	41.45067	-49.38343	2730
	480	2732			09:33:44	S	41.45050	-49.38324	2731
	480	2861			09:55:14	E	41.42274	-49.36085	2860

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	K134-01	Channels:	48	Source:	75/75 Cuda 61
Area:	SEANZ	Sample Rate:	1 sec	Shot Int:	10 sec
				Reel en:	8 sec

Sheet Number: 38

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot	Comments
29	481	2862	29 July	211	04:55:24	Start	41.42328	-49.36068	2861	
	481	2991			04:56:54	E	41.40422	-49.33826	2890	
	482	2992			04:57:04	S	41.40404	-49.33787	2991	
	482	3121			04:58:35	E	41.386940	-49.315282	3120	
	483	3122			04:58:45	S	41.380756	-49.315109	3121	
	483	3251			04:59:15	E	41.357416	-49.294479	3250	
	484	3252			04:59:25	S	41.357432	-49.294275	3251	
	484	3382			04:59:55	E	41.334309	-49.269228	3380	Shot 3342 missed
	485	3383			04:59:55	S	41.334123	-49.269669	3381	
	485	3512			04:59:55	E	41.310744	-49.244774	3510	
	486	3513			04:59:55	S	41.310565	-49.244576	3511	
	486	3642			04:59:55	E	41.286672	-49.228517	3640	
	487	3643			04:59:55	S	41.286771	-49.228551	3641	
	487	3772			04:59:55	E	41.263167	-49.200609	3770	
	488	3773			04:59:55	S	41.262985	-49.200134	3771	
	488	3902			04:59:55	E	41.239428	-49.172183	3900	
	489	3903			04:59:55	S	41.239245	-49.172476	3901	
	489	4032			04:59:55	E	41.215839	-49.151219	4030	
	490	4033			04:59:55	S	41.215657	-49.151452	4031	
	490	4162			04:59:55	E	41.192532	-49.131466	4160	
	491	4163			04:59:55	S	41.192303	-49.131257	4161	
	491	4292			04:59:55	E	41.168755	-49.105049	4290	
	492	4293			04:59:55	S	41.168574	-49.105260	4291	
	492	4422			04:59:55	E	41.144130	-49.084115	4420	
	493	4423			04:59:55	S	41.144397	-49.083970	4421	
	493	4552			04:59:55	E	41.120314	-49.060805	4550	
	494	4553			04:59:55	S	41.120127	-49.060650	4551	
End 29	494	4678			04:58:05		41.093676	-49.038976	4670	End Line 29

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	K178-c1	Channels:	48	Source:	75/15 min	G.I.
Area:	SENIR	Sample Rate:	1 ms.	Shot Int:	10 sec	Reclen:

Sheet Number: 39

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
30291	494	41682	29 July '64	211	41:58:45	E	41.096889	-49.038455	41680	
	495	41683			41:58:55	S	41.096881	-49.038390	41681	
Begin 30	495	41732			41:07:105		41.087097	-49.0412783	41730	Isol 30 #4730
	495	41812			41:20:125	E	41.077163	-49.062008	41810	
	496	41813			41:20:35	S	41.077060	-49.062250	41811	
	496	41942			41:42:04	E	41.060990	-49.094072	41940	
	497	41913			41:42:14	S	41.060872	-49.094208	41941	
	497	5072			41:03:44	E	41.094197	-49.126710	5070	
	498	5073			41:03:54	S	41.094359	-49.126959	5071	
	498	5074			41:25:24	E	41.077384	-49.159795	5070	
	499	5075			41:25:34	S	41.077604	-49.160054	5071	
	499	5076			41:49:04	E	41.011378	-49.192304	5330	
	500	5332			41:47:14	S	41.011258	-49.192519	5331	
End 30		5434			41:04:04		40.968626	-49.278028	5432	End 30
Begin 31	501	5436			41:11:04		41.060979	-49.229711	5434	Reel 31
	502	5437			41:08:14	E	41.098545	-49.226357	5436	
	501	5438			41:08:54	S	41.099045	-49.226611	5437	
	501	5592			41:30:24	E	41.022881	-49.250130	5590	
	502	5593			41:30:34	S	41.023076	-49.250316	5591	
	502	5722			41:52:04	E	41.041346	-49.273433	5720	
	503	5723			41:52:14	S	41.041544	-49.273604	5721	
	503	5852			41:51:44	E	41.033583	-49.296334	5850	
	504	5853			41:51:54	S	41.033771	-49.296510	5851	
	504	5982			41:35:24	E	41.058605	-49.319174	5980	
	505	5983			41:35:34	S	41.058812	-49.319342	5981	
	505	6112			41:57:05	E	41.123859	-49.342600	6110	
	506	6113			41:57:15	S	41.124060	-49.342248	6111	
	506	6242			41:18:45	E	41.149082	-49.365136	6240	



KNORR 179-01 Hi Res MCS Tape

Log

Sheet Number: 40

Cruise:	KN179-01	Channels:	48	Source:	HS/5500.0h
Area:	SENE	Sample Rate:	1m.	Shot Int.:	0sec.
				Reel en:	8sec.

Scanned

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
31	507	6243	24 July 04	211	19:18:55	S	41.149282	-49.365317	6241	
	507	6372			19:40:25	E	41.174060	-49.387942	6370	
	508	6373			19:40:35	S	41.174257	-49.388122	6371	
	508	6502			20:02:05	E	41.199035	-49.410697	6500	
	509	6503			20:02:15	S	41.199230	-49.410858	6501	
	509	6632			20:23:45	E	41.223944	-49.423283	6630	
	510	6633			20:23:55	S	41.22413	-49.43355	6631	
	510	6762			20:45:25	E	41.248992	-49.451096	6760	
	511	6763			20:45:35	S	41.249172	-49.452289	6761	
	511	6892			21:07:05	E	41.274079	-49.479639	6890	
	512	6893			21:07:15	S	41.274259	-49.479856	6891	
	512	7022			21:28:45	E	41.300593	-49.503022	7020	
	513	7023			21:28:55	S	41.300717	-49.503237	7021	
	513	7152			21:50:25	E	41.325318	-49.525749	7150	
	514	7153			21:50:35	S	41.325510	-49.525918	7151	
	514	7282			22:12:05	E	41.350289	-49.548571	7280	
	515	7283			22:12:15	S	41.350469	-49.548737	7281	
	515	7412			22:32:45	E	41.375224	-49.571429	7410	
	516	7413			22:33:55	S	41.375417	-49.571607	7411	
	516	7473			22:43:56	E	41.385898	-49.583329	7471	
32A	517	1			22:48:43	S	41.385622	-49.582021	Ø	No return from OVID 'shot 1-3 SOL #32A
		4			22:49:13		41.385374	-49.582897	2	
		6			22:49:32		41.385212	-49.583466	4	
	517	133			23:10:43	E	41.375132	-49.620543	131	
	518	134			23:10:53	S	41.375057	-49.620843	132	
	518	263			23:32:23	E	41.364559	-49.628596	261	
	519	264			23:32:33	S	41.364477	-49.628895	262	
		293			23:38:04		41.361827	-49.638608	295	End 32A navigation



KNORR 179-01 Hi Res MCS Tape

Log

Sheet Number: 41

Cruise:	KN17-01	Channels:	48	Source:	3515 Sec
Area:	SEN	Sample Rate:	1ms	Shot Int:	10 Sec
				Reclen:	8 sec

## Scramble

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
328 Sol	519	360	24 Jul 04	211	03:48:34		41.349803	-49.694257	358	SOL 328 SOL 358
	519	393			03:54:04	E	41.3493411	-49.678584	391	
	520	394			03:54:14	S	41.343222	-49.678398	392	
	520	523	30 Jul 04	212	04:15:44	E	41.348345	-49.656874	421	
	521	524			04:15:54	S	41.348145	-49.656711	522	
	521	653			04:23:24	E	41.343732	-49.635650	651	
	522	654			04:37:34	S	41.343554	-49.635487	652	
328 EOL	522	128			04:44:54		41.274632	-49.623331	726	EOL 328 SOL 726
	522	783			04:54:04	E	41.278290	-49.609052	781	
	523	784			04:54:14	S	41.278910	-49.608822	782	
32C SOL	523	793			04:56:14		41.280317	-49.607108	791	SOL 32C SOL 791
	523	913			04:56:14	E	41.301019	-49.584943	911	
	524	914			04:56:54	S	41.301207	-49.584744	912	
	524	1043			04:56:24	E	41.324348	-49.554712	1041	
	525	1044			04:56:34	S	41.324529	-49.554504	1042	
32C EOL	525	1069			04:56:44		41.324046	-49.554337	1067	EOL 32C SOL 1067
32D SOL	525	1161			04:56:04		41.317487	-49.544055	1159	SOL 32D SOL 1159
	525	1173			04:56:04	E	41.349678	-49.526717	1171	Line started before 411, miscalc!
	526	11741			04:56:14	S	41.349863	-49.526391	1172	
	526	1303			04:56:14	E	41.373743	-49.58036	1301	
	527	1304			04:56:54	S	41.373421	-49.580227	1302	
	527	1433			04:56:24	E	41.34389	-49.61461	1431	
	528	1434			04:56:34	S	41.34807	-49.61419	1432	
	528	1563			04:56:04	E	41.42200	-49.63803	1561	
	529	1564			04:56:14	S	41.42219	-49.63820	1562	
	529	1693			04:56:44	E	41.44620	-49.61691	1691	

\* 525 1119 04:55:04 41.33978 -49.55644 117 SOL 32D \* Observer to actual turn.

KNORR 179-01 Hi Res MCS Tape

Log

Sheet Number: 42

Cruise:	K0174-01	Channels:	48	Source:	75/75 cu in GI
Area:	5600	Sample Rate:	1 ms	Shot Int:	10 sec
Reel en: 8 sec					

See Acoustic

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
320	530	1694	30 July 04	212	08:30:54	S	41.44629	-49.66208	1692
	530	1823			08:52:23	E	41.44014	-49.68475	1821
	531	1824			08:52:33	S	41.44632	-49.68491	1822
	531	1953			09:14:05	E	41.4493041	-49.708436	1951
	532	1954			09:14:13	S	41.4493221	-49.708629	1952
	532	2083			09:35:43	E	41.516966	-49.732204	2081
	533	2084			09:35:53	S	41.517152	-49.732779	2082
	533	2213			09:52:23	E	41.54055	-49.75571	2211
	534	2214			09:53:33	S	41.54074	-49.75589	2212
	534	2343			5:19:03	E	41.56437	-49.77441	2341
	535	2344			5:19:13	S	41.56455	-49.77461	2342
	535	2423			5:40:43	E	41.58838	-49.80331	2421
	536	2424			5:40:53	S	41.58837	-49.80349	2422
	536	2603			6:02:23	E	41.64240	-49.82214	2601
	537	2604			6:02:33	S	41.64259	-49.82232	2602
	538	2733			6:24:03	E	41.63671	-49.85131	2731
	538	2734			6:24:13	S	41.63690	-49.85151	2732
	538	2863			6:45:43	E	41.66124	-49.87526	2861
	539	2864			6:45:53	S	41.66143	-49.87544	2862
	539	2993			6:07:24	E	41.68556	-49.90008	2991
	540	2994			6:07:34	S	41.68576	-49.90026	2992
	540	3123			6:29:04	E	41.70498	-49.92436	3121
	541	3124			6:29:13	S	41.71017	-49.92455	3122
		3225			7:46:04				3223 Begin turn FOL 320
320	541	3253			7:50:44	E	41.72764	-49.95286	3251
33	542	3254			7:50:54	S	41.72754	-49.95307	3252 End turn FOL 33
		3256			7:51:14				
	542	3383			8:12:24	E	41.70766	-49.98186	3381

250 mls lower 1000.

KNORR 179-01 Hi Res MCS Tape

Log

Sheet Number: 43

Cruise:	KN179-01	Channel:	48	Source:	75/45 sec in GI
Area:	SEAL	Sample Rate:	12us	Shot Int.:	10 sec
				Reel:	8 sec

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
33	543	3384	30 July	212	08:12:34	S	41.70750	-49.98209	3508
33	543	3510			08:13:34				Begin turn EOL 33
34	543	3513			08:34:04	E	41.68233	-50.01064	3511
	544	3514			08:34:14	S	41.68713	-50.01082	3512
		3551			08:40:24				3549 End turn BOL 34
	544	3643			08:55:44	E	41.66094	-49.99293	3641
	545	3644			08:55:54	S	41.66074	-49.99274	3642
	545	3723			09:17:24	E	41.63532	-49.96720	3721
	546	3724			09:17:34	S	41.63518	-49.96709	3722
		3819			09:25:04				3817 unannounced cle by D. Burns. to 1960
	546	3903			09:39:04	End	41.62044	-49.94148	3901
	547	3904			09:39:14	Start	41.60672	-49.97160	3902
		3952			09:47:14				3950: Begin turn
		3983			09:52:24				3981 End turn
	547	4033			10:00:44	E	41.57422	-49.96735	4031
	548	4034			10:00:54	S	41.57402	-49.96715	4032
	548	4163			10:22:24	E	41.55960	-49.94279	4161
	549	4164			10:22:34	S	41.55942	-49.94260	4162
	549	4293			10:44:04	E	41.53166	-49.94523	4291
	550	4294			10:44:14	S	41.53095	-49.94536	4292
	550	4423			11:05:44	E	41.50786	-49.89656	4421
	551	4424			11:05:54	S	41.50765	-49.89635	4422
	551	4553			11:27:24	E	41.47401	-49.87782	4551
	552	4554			11:27:34	S	41.47382	-49.87767	4552
	552	4683			11:49:04	E	41.46070	-49.84945	4681
	553	4684			11:49:14	S	41.46009	-49.84927	4682
	553	4813			12:10:44	E	41.43264	-49.82636	4811

See previous

3382

KNORR 179-01 Hi Res MCS Tape

Log

Cruise:	KN174-01	Channels:	48	Source:	75/75 cum	C-L
Area:	SENR	Sample Rate:	1ms	Shot Int:	10 sec.	
					Reel len:	8 sec.

Sheet Number: 44

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot	Comments
34	557	41814	30 July	212	12:10:44	S	41.436775	-49.826172	41212	
	554	41813			12:32:24	E	41.418811	-49.803577	41211	
	555	41814			12:32:34	S	41.418626	-49.803375	41212	
EOL 34	556	5079			12:55		41.389734	-49.779241	5077	EOL 34
	555	5073			12:54:04	E	41.390781	-49.780651	5071	
	556	5074			12:54:14	S	41.390549	-49.780653	5072	
	556				12:59:05		41.394862	-49.776988		Grave site
	556	5164			13:09:15	E	41.396757	-49.782457	5162	
35	557	1	31 July	213	06:05:27	S				Break to dredge + core
		17			06:07:58		41.431738	-49.801615	1	Begin acquisition
		95			06:20:59		41.41918	-49.83244	95	First shot
		105			06:22:39		41.41726	-49.83379	105	End Turn
	557	130			06:26:49	E	41.41171	-49.83503	130	
	558	131			06:26:59	S	41.41149	-49.83510	131	
	558	260			06:48:29	E	41.38374	-49.84236	260	
	559	261			06:48:34	S	41.38352	-49.84242	261	
	559	390			07:01:04	E	41.35616	-49.84916	390	
	560	391			07:01:19	S	41.35593	-49.84920	391	
	560	520			07:31:49	E	41.32844	-49.85637	520	
	561	521			07:31:59	S	41.32821	-49.85640	521	
	561	552			07:37:09		41.32156	-49.85800	552	Airgun off, Airguns.
	561	650			07:53:24	E	41.3859	-49.84885	650	
					07:53:39		41.3859	-49.84885		
	564	911			08:36:59	S	41.32271	-49.85616	911	Reds 562, 563 down exist.
	564	992			08:50:29		41.31968	-49.84947	992	resumes firing airgun.
	564	1040			08:58:29	E	41.32205	-49.84810	1040	

1167  
sat 1165 possible clock errors begin

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KU174-01	Channels:	48	Source:	76/75 sec in G I
Area:		Sample Rate:	1205	Shot Int.:	10 sec
				Reel em:	8 sec

Sheet Number: 45

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
35	565	1041	31 July	213	08:58:39	S	41.322202	-49.84809	1041
	565	1167			09:19:39		41.32140	-49.85941	1167 crossed pt are broke off line
	565	1176			09:20:09		41.32035	-49.85825	1176
	566	1171			09:20:19		41.32055	-49.85840	1171
	566	1300			09:41:49		41.29215	-49.86583	1300
	567	1301			09:41:59		41.29194	-49.86592	1301
	567	1430			09:03:29		41.26301	-49.87335	1430
	568	1431			09:03:39		41.26281	-49.87349	1431
	568	1560			09:25:09		41.23440	-49.88093	1560
	569	1561			09:25:19	S	41.23419	-49.88102	1561
	569	1691			09:46:59	E	41.205218	-49.888502	1691
	570	1692			09:47:09	S	41.205027	-49.888561	1692
50635	570	1740			09:55:09		41.194319	-49.891228	1740 EOL 35
50636	570	1767			09:59:09	E	41.189023	-49.890224	1764 SOL 36
	571	1822			10:08:29		41.178350	-49.880150	1821
	571	1951			10:31:49	S	41.173157	-49.880292	1822
	572	1951			10:32:19	E	41.154081	-49.858455	1951
	572	2082			10:29	S	41.153897	-49.858296	1952
	573	2083			10:29	E	41.129951	-49.858590	2082
	573	2217			10:52:19	S	41.129783	-49.836719	2083
	574	2217			10:52:49	E	41.105936	-49.841283	2217
	574	2242			10:53	S	41.105944	-49.841615	2218
	575	23413			10:53:29	E	41.082006	-49.793086	2242
	575	23413			10:55:39	S	41.081261	-49.792531	23413
	575	2472			10:57:09	F	41.057615	-49.770924	2472
	576	2472			10:57:19	S	41.057421	-49.770763	2473
	576	2602			10:57:19	E	41.033215	-49.748897	2602
	577	2603			10:58:56	S	41.033030	-49.748716	2603

66 2212  
3 71 2141

KNORR 179-01 Hi Res MCS Tape

Log

Cruise:	KN174-01	Channels:	48	Source:	75175 sec
Area:	SENR	Sample Rate:	1ms	Shot Int:	10 sec
				Reel en:	8 sec

Sheet Number: 46

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Swits	Comments
36	577	2733	31 July	213	18:40:39	E	41.008468	-49.724651	2732	Lost shot 2690
	578	2734			18:40:49	S	41.008490	-49.724672	2733	
	578	2863			19:02:19	E	40.989103	-49.704462	2862	
	579	2864			19:02:29	S	40.983918	-49.704276	2863	
	579	2992			19:23:59	E	40.980092	-49.682668	2992	
	580	2997			19:29:04	S	40.959836	-49.682194	2993	
	580	3123			19:45:09	E	40.936116	-49.661093	3122	
	581	3124			19:45:49	S	40.935926	-49.660881	3123	
	581	3253			19:07:19	E	40.912225	-49.639391	3252	
	582	3254			19:09:29	S	40.912046	-49.639210	3253	
End 36	582	3251			19:23:40		40.894286	-49.623172	3250	End 36
504.37	582	3366			19:26:08		40.880542	-49.622821	3365	504.37
	582	3383			19:28:59	E	40.887392	-49.624031	3382	
	583	3384			19:29:09	S	40.887114	-49.624111	3383	
	583	3513			19:50:39	E	40.859621	-49.632749	3512	
	584	3514			19:50:49	S	40.858793	-49.632815	3513	
	584	3643			19:12:19	E	40.836471	-49.641164	3642	
	585	3644			19:12:29	S	40.836267	-49.641158	3643	
	585	3703			19:33:59	E	40.801956	-49.650544	3702	
	586	3704			19:34:09	S	40.801780	-49.650610	3703	
	586	3903			19:55:09	E	40.773289	-49.659551	3902	
	587	3904			19:55:49	S	40.773094	-49.659636	3903	
	587	4103			19:17:19	E	40.744571	-49.6687157	4102	
	588	4104			19:17:29	S	40.744342	-49.668828	4103	
	588	4163			19:38:57	E	40.715854	-49.677415	4162	
	589	4164			19:39:05	S	40.715669	-49.677507	4163	
	589	4293			19:00:39	E	40.687217	-49.686538	4292	
	590	4294			19:00:49	S	40.687000	-49.686617	4293	

KNORR 179-01 Hi Res MCS Tape

Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 Sec
Area:	SEVIR	Sample Rate:	1ms	Shot Int:	10sec

Reel en: 8 sec.

Sheet Number: 47

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Size	Comments
37	590	41423	3/20/04	213	18:22:19	E	40.658495	-49.695333	4472	
	591	41424			18:22:29	S	40.658271	-49.695105	4473	
	591	41423			18:43:51	E	40.625571	-49.704311	4552	
	592	41531			18:44:09	S	40.629341	-49.704336	4553	
	592	41483			19:05:39	E	40.600865	-49.713201	4682	
	593	41484			19:05:49	S	40.600647	-49.713201	4683	
	593	41483			19:27:19	E	40.572024	-49.722151	4812	
	594	41411			19:27:29	S	40.571710	-49.722220	4813	
	594	41443			19:48:59	E	40.512666	-49.731320	4942	
	595	41444			19:49:09	S	40.542411	-49.731395	4943	
	595	5073			20:10:39	E	40.513452	-49.740343	5072	
	596	5074			20:10:49	S	40.513225	-49.740414	5073	
	596	5203			20:32:19	E	40.483852	-49.744554	5202	
	597	5204			20:32:29	S	40.483636	-49.744622	5203	
	598	5333			20:53:59	E	40.45509	-49.75845	5332	
	598	5334			20:54:09	S	40.45488	-49.75855	5333	
	598	5163			21:15:39	E	40.424654	-49.767886	5162	
	599	5164			21:15:49	S	40.424414	-49.767970	5163	
	599	5593			21:37:19	E	40.393823	-49.777431	5592	
	600	5594			21:37:29	S	40.393579	-49.777507	5593	
	600	5323			21:58:59	E	40.362888	-49.787064	5322	
	601	5324			21:59:09	S	40.362634	-49.787127	5323	
	601	5853			22:20:39	E	40.331364	-49.796740	5852	
	602	5854			22:20:49	S	40.331118	-49.796873	5853	
	602	5983			22:42:14	E	40.299064	-49.806765	5982	
	603	5984			22:42:24	S	40.298825	-49.806834	5983	
	603	6113			23:03:59	E	40.267937	-49.816438	6112	

KNORR 179-01 Hi Res MCS Tape

Log

6449

Cruise:	KN174-vi	Channels:	48	Source:	2575 sec. in.	617
Area:	SENR	Sample Rate:	1m.	Shot Int:	10 sec.	
						Reel en:
						8 sec.

Sheet Number: 48

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
37	604	6114	31 July 04	213	23:04:04	S	40.227710	-49.816511	6113	
	604	6243			23:25:39	E	40.237807	-49.825849	6242	
	605	6244			23:25:44	S	40.237563	-49.825721	6243	
	605	6373			23:47:19	E	40.208764	-49.834829	6372	
	606	6374			23:47:29	S	40.208533	-49.834902	6373	
	606	6503	1 Aug 04	214	00:08:59	E	40.198552	-49.841254	6502	
	607	6504			00:09:09	S	40.175365	-49.841301	6503	
	607	6633			00:30:39	E	40.150146	-49.852421	6632	
	608	6634			00:30:44	S	40.144947	-49.853003	6633	
	609	6763			00:52:14	E	40.120944	-49.861981	6762	
	609	6764			00:52:29	S	40.120724	-49.862047	6763	
	609	6893			01:13:59	E	40.091432	-49.870675	6892	
	610	6894			01:14:09	S	40.091718	-49.871050	6893	
	610	7023			01:35:39	E	40.063146	-49.879869	7022	
	611	7024			01:35:44	S	40.062767	-49.879933	7023	
EOL 37	611	7132			01:55:49	E	40.039516	-49.887277	7131	begin turn gun remain off R214Z603
										until 02:09 for mouse manual observation period.
EOL 38	612	1			02:13:47	S	40.041786	-49.913412	1	
		2			02:13:57	E	40.041829	-49.913642	2	1st OYO shot
	612	130			02:55:17	E	40.055161	-49.943061	130	
	613	131			02:55:22	S	40.055252	-49.943277	131	
	613	243			02:54:07	E	40.06672	-49.96911	243	start turn EOL 38
38	613	260			02:56:57	E	40.06915	-49.97226	260	
39	614	261			02:57:07	S	40.06932	-49.97239	261	
	614	302			03:03:52	E	40.07454	-49.97093	302	end turn R20239
	614	390			03:18:32	E	40.08216	-49.95348	390	
	615	391			03:18:49	S	40.08236	-49.95330	391	
	615	520			03:40:17	E	40.11334	-49.98224	520	



KNORR 179-01 Hi Res MCS Tape

Log

Cruiser:	KN179-01	Channels:	48	Source:	
Area:	SEALR	Sample Rate:	1ms	Shot Int.:	

Time	Start/End	Latitude	Longitude
7:51:45 Sec	6I	40.11350	-49.92606
10 sec		40.13422	-49.89952
Reclen:	8 sec	40.13438	-49.94931

Sheet Number: 49

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
39	616	521	1 Aug '04	214	03:40:27	S	40.11350	-49.92606	521
	616	650			4:01:57	E	40.13422	-49.89952	650
	617	651			4:02:07	S	40.13438	-49.94931	651
	617	780			4:23:37	E	40.15496	-49.87288	780
	618	781			4:23:47	S	40.15513	-49.87267	781
	618	910			4:45:17	E	40.17550	-49.84645	910
	619	911			4:45:27	S	40.17566	-49.84625	911
	619	1040			5:06:57	E	40.17595	-49.82015	1040
	620	1041			5:07:07	S	40.17611	-49.81996	1041
	620	1170			5:28:38	E	40.21656	-49.79367	1170
	621	1171			5:28:48	S	40.21671	-49.79345	1171
	621	1300			5:50:18	E	40.25860	-49.76643	1300
	622	1301			5:50:28	S	40.25878	-49.76624	1301
	622	1430			6:11:58	E	40.25867	-49.75836	1430
	623	1431			6:12:08	S	40.25883	-49.75814	1431
	623	1560			6:35:38	E	40.27981	-49.71212	1560
	624	1561			6:35:48	S	40.27998	-49.71193	1561
	624	1690			6:55:18	E	40.32097	-49.68442	1690
	625	1691			6:55:28	S	40.32112	-49.68470	1691
	625	1820			7:16:58	E	40.32189	-49.65796	1820
	626	1821			7:17:08	S	40.32205	-49.65774	1821
	626	1950			7:38:38	E	40.34273	-49.63104	1950
	627	1951			7:38:48	S	40.34290	-49.63085	1951
	627	2080			8:00:18	E	40.36341	-49.60437	2080
	628	2081			8:00:28	S	40.36357	-49.60420	2081
	628	2210			8:21:58	E	40.38373	-49.57814	2210
	629	2211			8:22:08	S	40.38389	-49.57792	2211
	629	2340			8:43:38	E	40.40425	-49.55174	2340

KNORR 179-01 Hi Res MCS Tape

Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 sec in 6E
Area:	SEAIR	Sample Rate:	1 ms	Shot Int.:	10 sec
				Reel in:	8 sec

Sheet Number: 50

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
39	630	2341	1 Aug 04	214	08:43:48	S	40.40440	-49.55153	2341	
	630	2410			09:05:18	E	40.42478	-49.52535	2470	
	631	2471			09:05:28	S	40.42444	-49.52514	2471	
	631	2600			09:26:58	E	40.44552	-49.44848	2600	
	632	2601			09:27:08	S	40.44564	-49.44829	2601	
	632	2730			09:48:37	E	40.46635	-49.44159	2730	
	633	2731			09:48:47	S	40.46644	-49.44139	2731	
	633	2861			10:10:27	E	40.48734	-49.44447	2860	No return from 2861 at 10:09:107
	634	2862			10:10:37	S	40.48744	-49.44427	2861	
	634	2991			11:32:07	E	40.50832	-49.41246	2990	
	635	2992			11:32:17	S	40.50848	-49.41226	2991	
	635	3121			11:53:47	E	40.525167	-49.390944	3126	
	636	3122			11:53:57	S	40.525321	-49.390265	3121	
	636	3251			11:51:27	E	40.550247	-49.363895	3250	
	637	3252			11:51:57	S	40.550557	-49.363192	3251	
	637	3381			11:57:07	E	40.570968	-49.336412	3382	
	638	3382			11:57:17	S	40.571125	-49.336195	3381	
	638	3511			11:58:47	E	40.592300	-49.308451	3516	
	639	3512			11:58:57	S	40.592457	-49.308532	3511	
	639	3641			12:20:27	E	40.613975	-49.286666	3646	
	640	3642			12:20:37	S	40.614081	-49.286902	3641	
	640	3771			12:42:07	E	40.635365	-49.252895	3776	
	641	3772			12:42:17	S	40.635520	-49.252687	3771	
	641	3901			12:53:47	E	40.656526	-49.225337	3900	
	642	3902			12:53:57	S	40.656685	-49.225119	3901	
	642	4031			12:55:28	E	40.674621	-49.198063	4030	
	643	4032			12:55:38	S	40.674787	-49.197798	4031	
	643	4161			13:17:08	E	40.698546	-49.170824	4160	

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 cm <sup>2</sup> G.I.
Area:	SENR	Sample Rate:	1 ms.	Shot Int.:	10 sec
				Reclen:	8 sec.

Sheet Number: 51

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
39	644	4162	1 Aug 04	214	13:47:18	S	40.692798	-49.176623	4161	
	644	41291			14:08:45	E	40.719121	-49.141060	4166	
	645	41292			14:08:58	S	40.719325	-49.141285	4191	
	645	41421			14:30:24	E	40.739827	-49.117316	4120	
	646	41422			14:30:38	S	40.740039	-49.117113	4121	
	646	41551			14:52:08	E	40.760451	-49.090494	4450	
	647	41552			14:52:18	S	40.760622	-49.090455	4451	
	647	41631			15:13:43	E	40.781104	-49.063647	41686	
	648	41632			15:13:58	S	40.781259	-49.063486	41681	
	648	41811			15:35:28	E	40.802108	-49.036576	41810	
	649	41812			15:35:38	S	40.802264	-49.036498	41811	
	649	41841			15:57:03	E	40.822924	-49.009248	41940	
	650	41842			15:57:12	S	40.823083	-49.009041	41941	
	650	52411			16:18:48	E	40.845555	-48.982437	5230	
	651	52412			16:18:58	S	40.845722	-48.982226	5231	
	651	5261			16:40:28	E	40.864240	-48.955584	5200	
	652	5262			16:40:38	S	40.864408	-48.955388	5201	
	652	5381			17:02:08	E	40.884186	-48.928723	5380	
	653	5382			17:02:18	S	40.885046	-48.928514	5381	
	653	5441			17:23:49	E	40.905608	-48.901704	5460	
	654	5442			17:23:59	S	40.905766	-48.901520	5461	
	654	5591			17:45:29	E	40.926553	-48.874572	5590	
	655	5592			17:45:39	S	40.926515	-48.874332	5591	
	655	5721			18:07:08	E	40.947258	-48.847457	5720	
	656	5722			18:07:18	S	40.947419	-48.847204	5721	
	656	5851			18:28:48	E	40.968067	-48.820282	5850	
	657	5852			18:28:58	S	40.968231	-48.820082	5851	
	657	5981			18:50:27	E	40.989958	-48.797240	5980	

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75175 in	6-I.
Area:	SENR	Sample Rate:	1 sec.	Shot Int.:	10 sec.	Reel on:
						8 sec.

Sheet Number: 52

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
39	658	5982	1 Aug 04	214	18:50:37	S	40.989119	-48.773080	5781	
	658	6111			19:12:07	E	41.009571	-48.766301	6110	
	659	6112			19:12:17	S	41.009720	-48.766085	6111	
	659	6211			19:33:47	E	41.030150	-48.739533	6240	
	660	6212			19:37:57	S	41.030302	-48.739323	6241	
	660	6371			19:55:27	E	41.050748	-48.712694	6370	
	661	6372			19:55:37	S	41.050907	-48.712486	6371	No return from O10 6449 20:08:27
	661	6502			20:17:17	E	41.071551	-48.68530	6500	
	662	6503			20:17:27	S	41.071719	-48.685327	6501	
	662	6632			20:38:57	E	41.09217	-48.65854	6630	
	663	6633			20:39:07	S	41.09233	-48.65834	6631	
	663	6762			21:00:37	E	41.11314	-48.63109	6760	
	664	6763			21:00:48	S	41.11332	-48.63087	6761	
	664	6842			21:22:18	E	41.13453	-48.603765	6840	
	665	6843			21:22:28	S	41.134316	-48.603547	6841	
	665	7022			21:42:58	E	41.154736	-48.576104	7020	
	666	7023			21:44:08	S	41.154907	-48.576708	7021	
	666	7152			22:05:38	E	41.155344	-48.544956	7150	
	667	7153			22:05:48	S	41.155502	-48.544719	7151	
	667	7282			22:27:18	E	41.196034	-48.532909	7280	
	668	7283			22:27:28	S	41.196200	-48.532706	7281	
	668	7412			22:48:58	E	41.216682	-48.445954	7410	
	669	7413			22:49:08	S	41.216853	-48.445729	7411	
	669	7542			23:10:38	E	41.237227	-48.468778	7540	
	670	7543			23:10:48	S	41.237382	-48.468768	7541	
	670	7672			23:32:18	E	41.257641	-48.442085	7670	
	671	7673			23:32:28	S	41.257806	-48.441883	7671	
	671	7802			23:53:58	E	41.278393	-48.411438	7800	

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KNR(9-1)	Channels:	48	Source:	35/35 sec in	Reel:	G.I.
Area:	SENR	Sample Rate:	1 ms	Shot Int:	10 sec	Reel len:	8 sec

Sheet Number: 53

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
39	672	7803	1 Aug 04	214	23:59:08	S	41.238504	-48.411730	7801	
	672	7832	2 Aug 04	215	00:15:38	E	41.288502	-48.388294	7830	
	673	7933			00:15:48	S	41.299061	-48.388080	7931	
	673	8062			00:37:18	E	41.319364	-48.361291	8060	
	674	8062			00:37:28	S	41.319521	-48.361083	8061	
	674	8192			00:59:58	E	41.339957	-48.331402	8190	
	675	8193			00:59:08	S	41.340114	-48.334192	8191	
	675	8322			01:20:39	E	41.360943	-48.302739	8320	
	676	8323			01:20:49	S	41.361115	-48.306531	8321	
	676	8452			01:42:14	E	41.382020	-48.279242	8450	
	677	8453			01:42:29	S	41.382199	-48.279031	8451	
	677	8582			02:03:59	E	41.402864	-48.251874	8580	
	678	8583			02:04:09	S	41.403036	-48.251663	8581	
	678	8712			02:25:39	E	41.423903	-48.229193	8710	
	679	8713			02:25:49	S	41.424072	-48.223977	8711	
	679	8842			02:47:19	E	41.445311	-48.196104	8840	
	680	8843			02:47:29	S	41.445479	-48.195709	8841	
	680	8973			03:09:09	E	41.466900	-48.16775	8970	
	681	8974			03:09:19	S	41.46704	-48.16753	8971	
	681	9103			03:30:49	E	41.48818	-48.13420	9100	
	682	9104			03:30:59	S	41.48836	-48.13440	9101	
END 39	682	9152			03:58:59		41.49643	-48.12887	9149	Begin Turn END 39
	682	9157			03:59:49		41.497146	-48.127901	9154	End of Turn
	682	9160			03:59:59	E			9152	End of reel
	683	1			03:59:30	S				End of turn
40	683	20			03:53:33		41.50113	-48.13094	1	Begin acquisition
	683	20			03:53:33		41.511529	-48.13560	20	First shot
	683	130			04:12:03	E	41.52541	-48.16280	130	

KNORR 179-01 Hi Res MCS Tape Log

Cruise: <b>KN 179-01</b>	Channel: <b>48</b>	Source: <b>75/75 du in GI</b>	Reel: <b>8 sec</b>
Area: <b>SENR</b>	Sample Rate: <b>1ms</b>	Shot Int.: <b>10ms</b>	

Sheet Number: **54**

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
40	684	131	2 Aug '04	215	04:12:03	S	41.52552	-48.16305	131	
	684	260			04:33:33	E	41.541900	-48.19486	260	
	685	261			04:33:43	S	41.54203	-48.19510	261	
	685	345			04:47:43		41.55266	-48.21572	345	Begin Turn EOL 40
40	685	390			04:55:13	E	41.55106	-48.22811	390	
41	686	391			04:55:23	S	41.55088	-48.22830	391	
	686	402			4:57:03		41.54871	-48.22983	402	End Turn BOL 41
	686	520			5:16:53	E	41.52450	-48.24117	520	
	687	521			5:17:03	S	41.52428	-48.24106	521	
	687	651			5:38:43	E	41.44788	-48.25227	650	NO return from 400 at shot 582
	688	652			5:38:53	S	41.44768	-48.25234	651	05:27:13
	688	781			6:00:23	E	41.47157	-48.26367	780	
	689	782			6:00:33	S	41.47138	-48.26373	781	
	689	911			6:22:02	E	41.44523	-48.27489	910	
	690	912			6:22:12	S	41.44501	-48.27495	911	
	690	1041			6:43:42	E	41.41837	-48.28627	1040	
	691	1042			6:43:52	S	41.41816	-48.28636	1041	
	691	1171			7:05:22	E	41.39150	-48.29770	1170	
	692	1172			7:05:32	S	41.39129	-48.29777	1171	
	692	1301			7:27:02	E	41.36475	-48.30910	1300	
	693	1302			7:27:12	S	41.36454	-48.30919	1301	Reel 693 NO Return from 040 at
	693	1432			7:48:52	E	41.33843	-48.32046	1430	Slot 1356 OT:36:12
	694	1433			7:49:02	S	41.33824	-48.32055	1431	
	694	1562			8:10:32	E	41.31202	-48.33166	1560	
	695	1563			8:10:42	S	41.31182	-48.33175	1561	
	695	1642			8:32:12	E	41.28523	-48.34344	1640	
	696	1643			8:32:22	S	41.28503	-48.34321	1641	
	696	1822			8:53:52	E	41.25845	-48.35439	1820	

Wpt 2 1860

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN174-1	Channels:	48	Source:	TS/75 du in GI
Area:	SEAWR	Sample Rate:	1745	Shot Int:	10 Sec
				Reclen:	8 sec

Sheet Number: 55

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot	Comments
41	697	1823	2 Aug '04	215	8:54:02	S	41.25876	-48.35444	1821	
	697	1860			9:00:12		41.25143	-48.35759	1858	Cross area track line at wpt 2
	697	1952			9:15:32	E	41.23388	-48.36610	1950	
	698	1953			9:15:42	S	41.23318	-48.36618	1951	
	698	2082			9:37:12	E	41.20705	-48.37858	2080	
	699	2083			9:37:22	S	41.20685	-48.37869	2081	
	699	2212			9:58:52	E	41.18061	-48.39017	2210	
	700	2213			9:59:02	S	41.18040	-48.39116	2211	
	700	2342			10:20:33	E	41.15420	-48.40360	2340	
	701	2343			10:20:43	S	41.15400	-48.40369	2341	
	701	2472			10:42:13	F	41.127508	-48.41642	2470	
	702	2473			10:42:23	S	41.127335	-48.416243	2471	
	702	2602			11:03:52	E	41.100405	-48.429025	2600	
	703	2603			11:04:03	S	41.100207	-48.429112	2601	No. 8. 1000 du shot 2670
	704	2771			11:25:43	E	41.078246	-48.440932	2770	
	704	2841			11:25:53	S	41.078049	-48.441034	2841	No. 8. 1000 du shot 2769
	705	2842			11:47:33	E	41.041605	-48.454127	2840	
	705	2901			11:47:43	S	41.048854	-48.454902	2901	
	706	2902			12:09:13	E	41.019217	-48.470213	2900	
	706	2965			12:09:23	S	41.019410	-48.470233	2961	
	706	3171			12:20:52	E	40.992473	-48.472078	3120	
	707	3172			12:21:03	S	40.992229	-48.472227	3121	
	707	3254			12:52:33	E	40.966625	-48.479248	3250	
	708	3255			12:52:43	S	40.965465	-48.480332	3251	
	708	3284			13:04:12	E	40.938397	-48.508472	3280	
	709	3285			13:04:23	S	40.937597	-48.508571	3281	
	709	3541			13:35:53	E	40.911084	-48.518165	3510	
	710	3545			13:36:03	S	40.911465	-48.518207	3511	

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN:79-01	Channels:	48	Source:	75/75 cwin	CT	
Area:	SENZ	Sample Rate:	1m/s	Shot Int.:	10 sec	Reclen:	65 sec

Sheet Number: 56

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	SLot	Comments
41	710	3044	2 Aug 64	215	13:57:34	E	40.884797	-48.530862	3640	
	711	3045			13:57:44	S	40.884578	-48.530973	3641	
	711	3046			14:19:14	E	40.884628	-48.541364	3720	
	712	3047			14:19:24	S	40.884718	-48.543743	3721	
	712	3048			21:40:54	E	40.885647	-48.556467	3960	
	713	3049			14:41:04	S	40.885646	-48.556523	3961	
	713	4050			15:02:34	E	40.885909	-48.569959	4020	
	714	4051			15:02:44	S	40.886362	-48.569913	4021	
	714	4052			15:24:14	E	40.777582	-48.581121	4160	
	715	4053			15:24:24	S	40.777384	-48.581517	4161	
	715	4054			15:45:54	E	40.781469	-48.597262	4240	
	716	4055			15:46:04	S	40.781212	-48.597049	4241	
	716	4056			16:07:34	E	40.775227	-48.606662	4420	
	717	4057			16:07:44	S	40.775091	-48.606157	4421	
	717	4058			16:29:14	E	40.686676	-48.615512	4560	
	718	4059			16:29:24	S	40.686729	-48.618649	4561	
	718	4060			16:50:54	E	40.686967	-48.631150	4680	
	719	4061			16:51:04	S	40.686785	-48.631017	4681	
	719	4062			17:12:34	E	40.645047	-48.643545	4800	
	720	4063			17:12:44	S	40.645046	-48.643647	4801	
	720	4064			17:34:14	E	40.618602	-48.656272	4920	
	721	4065			17:34:24	S	40.618397	-48.656398	4921	
	721	5074			17:55:54	E	40.618395	-48.668224	5070	
	722	5075			17:56:04	S	40.618395	-48.668229	5071	
	722	5076			18:17:33	E	40.618395	-48.6681362	5200	
	723	5077			18:17:43	S	40.618395	-48.6681344	5201	
	723	5078			18:38:13	E	40.618395	-48.693769	5330	
	724	5079			18:38:23	S	40.618395	-48.693831	5331	



KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 sec	6L
Area:	SENE	Sample Rate:	1ms	Shot Int.:	10sec	
				Reclen:	8 sec	

Sheet Number: 57

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Start #	Comments
411	724	5464	2 Aug 04	215	19:00:53	E	40.511481	-48.706330	5460	
	725	5465			19:01:03	S	40.511773	-48.706419	5461	
	725	5594			19:22:33	E	40.485158	-48.718832	5590	
	726	5595			19:22:43	S	40.484964	-48.718946	5591	
	726	5724			19:44:13	E	40.487446	-48.731433	5720	
	727	5725			19:44:23	S	40.488253	-48.731543	5721	
	727	5854			20:05:53	E	40.431701	-48.743916	5850	
	728	5855			20:06:03	S	40.431543	-48.744013	5851	
	728	5984			20:27:33	E	40.40482	-48.75648	5980	
	729	5985			20:27:43	S	40.40462	-48.75657	5981	
	729	6114			20:49:13	E	40.378062	-48.769095	6110	
	730	6115			20:49:23	S	40.378861	-48.769188	6111	
	730	6244			21:00:53	E	40.351292	-48.78150	6240	
	731	6245			21:11:03	S	40.351093	-48.781603	6241	
	731	6374			21:32:33	E	40.324542	-48.793983	6370	
	732	6375			21:32:43	S	40.324346	-48.794075	6371	
	732	6504			21:54:13	E	40.297337	-48.806487	6500	
	733	6505			21:54:23	S	40.297535	-48.806573	6501	
	733	6634			22:15:54	E	40.271018	-48.819084	6630	
	734	6635			22:16:04	S	40.270810	-48.819183	6631	
	734	6764			22:37:34	E	40.244194	-48.831502	6760	
	735	6765			22:37:44	S	40.243911	-48.831632	6761	
	735	6894			22:59:14	E	40.212269	-48.844112	6890	
	736	6895			22:59:24	S	40.212063	-48.844229	6891	
	736	7024			23:20:54	E	40.140498	-48.856023	7020	Last complete good tape
	737	7025			23:21:04	S	40.140293	-48.856163	7021	23:24 no good OYO
	737	7030			23:21:24	E	40.139263	-48.857182	7026	controller error, briefly

amount,

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KNORR-01	Channels:	48	Source:	75/35 sec	Reel on:	8 sec
Area:	SENR	Sample Rate:	1 ms	Shot Int:	10 sec		

Sheet Number: 58

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
41	738		2 Aug '04	215		S				N.B. ? Fetched tape to collect
	738					E				" acquisition.
41	739	7106			23:34:34	S	40.176195	-48.868083	1	
	739	7236			23:56:14	E	40.201876	-48.878265	130	
	740	7237			23:56:24	S	40.202110	-48.879173	131	
	740	7366	3 August '04	216	00:17:54	E	40.227658	-48.889466	260	
	741	7367			00:18:04	S	40.227680	-48.888160	261	
	741	7460			00:33:34		40.216242	-48.847199	354	Back on line 841 ~5 minutes to
	741	7496			00:54:34	E	40.202738	-48.850567	350	turnoff -
	742	7497			00:39:44	S	40.202730	-48.850665	351	beginning
	742	7557			00:44:44		40.190334	-48.856509	457	Put the point where shot #3020
										represents start of live break point.
	742	7626			01:01:14	E	40.176134	-48.863198	500	
	743	7627			01:01:24	S	40.175931	-48.863227	521	
	743	7756			01:22:54	E	40.149357	-48.875624	650	
	744	7757			01:23:04	S	40.149148	-48.875713	651	
	744	7886			01:44:34	E	40.122472	-48.889224	780	
	745	7887			01:44:44	S	40.122260	-48.888302	781	
	745	8016			02:06:15	E	40.045590	-48.900131	910	
	746	8017			02:06:25	S	40.045381	-48.900845	911	
	746	8116			02:27:55	E	40.068994	-48.913073	1040	
	747	8117			02:28:05	S	40.068789	-48.913183	1041	
	747	8276			02:49:34	E	40.04248	-48.92537	1170	
	748	8277			02:49:44	S	40.04228	-48.92545	1171	
	748	8406			03:11:14	E	40.01567	-48.93783	1300	
	749	8407			03:11:24	S	40.01545	-48.93792	1361	
	749	8536			03:32:54	E	39.98904	-48.95021	1430	
					03:32:54					

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN178-01	Channels:	48	Source:	75/75 sec	GI
Area:	SEADR	Sample Rate:	12.5	Shot Int.:	10 sec	
				Reclen:	8 sec	

Sheet Number: 59

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
41	750	8537	3 Aug '04	216	03:33:04	S	39.98884	-49.95030	1431
	750	8666			3:54:34	E	39.96222	-49.96268	1560
	751	8667			3:54:44	S	39.96202	-49.96277	1561
	751	8796			4:16:14	E	39.93524	-49.93519	1690
	752	8797			4:16:24	S	39.93503	-49.97530	1691
	752	8926			4:37:53	E	39.90807	-49.98782	1820
	753	8927			4:38:03	S	39.90786	-49.98792	1821
	753	9056			4:59:33	E	39.886757	-49.00045	1950
	754	9057			4:59:43	S	39.88057	-49.00053	1951
	754	9186			5:21:13	E	39.85361	-49.0307	2080
	755	9187			5:21:23	S	39.85340	-49.0316	2081
	755	9316			5:42:53	E	39.82666	-49.02551	2210
	756	9317			5:43:03	S	39.82646	-49.02561	2211
	756	9446			6:04:33	E	39.79944	-49.03786	2340
	757	9447			6:04:43	S	39.79923	-49.03795	2341
	757	9576			6:26:14	E	39.77251	-49.05016	2470
	758	9577			6:26:24	S	39.77330	-49.05023	2471
	758	9706			6:47:04	E	39.74628	-49.06275	2600
	759	9707			6:48:04	S	39.74608	-49.06284	2601
	759	9836			7:09:34	E	39.71831	-49.07567	2730
	760	9837			7:09:44	S	39.71809	-49.07580	2731
	760	9966			7:31:14	E	39.69129	-49.08821	2860
	761	9967			7:31:24	S	39.69108	-49.08831	2861
	761	10050			7:45:14	E	39.67408	-49.09625	2944
41	761	10046			7:52:54	E	39.66450	-49.10529	2940
42	762	10047			7:53:04	S	39.66454	-49.10553	2941
	762	16108			7:54:54	E	39.67019	-49.10816	3002
	762	10226			8:14:34	E	39.68206	-49.13932	3120

14  
84

KNORR 179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 Gain 6I	Reel len:	8 sec
Area:	SE RIR	Sample Rate:	1 ms	Shot Int.:	10 sec		

Sheet Number: 60

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
42	763	10227	3 Aug '04	216	08:14:44	S	39.68215	-49.13460	2120 7.0 kts thru W 506=4.3
	763	10356			8:36:14	E	39.69512	-49.16354	3250
	764	10357			8:36:24	S	39.69522	-49.16377	3251
	764	10486			8:57:54	E	39.70766	-49.19148	3380
	765	10487			8:58:04	S	39.70775	-49.19170	3381
	765	10615			9:19:24	E	39.72006	-49.21920	3509
	766	10616			9:19:34	S	39.72017	-49.21942	3510
42	766	10723			9:21:24	E	39.73014	-49.24267	3617 lost shot gun off to reintialize Slat #5
43	767	1			9:44:09		39.73452	-49.25143	1 resume firing
	767	95			9:59:49		39.74359	-49.24165	95 Began Turning
	767	131			10:05:49		39.74499	-49.27207	130 No return from Dyo at Slat 129
	768	132			10:05:59		39.75013	-49.24185	131
	768	134			10:06:09		39.75038	-49.24136	133 End turn onto line 43
	768	262			10:22:39		39.77084	-49.24434	260 No return from Dyo at Slat 192 at 10:15:59
	769	263			10:22:49		39.77105	-49.24417	261 No return from Dyo at Slat 199 at 10:38:49
	769	393			10:49:29		39.79019	-49.21340	350
	770	394			10:49:39		39.79037	-49.21317	391
	770	523			11:11:09		39.81087	-49.18613	520
	771	524			11:11:19		39.81102	-49.18595	521
	771	653			11:32:49		39.83077	-49.15855	650
	772	654			11:32:59		39.83093	-49.15832	651
	772	745			11:48:30		39.84524	-49.13757	742 Guns shut down. Beginning loop.
	772	783			11:54:29		39.85110	-49.12924	772
	773	1			12:11:07		39.85684	-49.11038	1 Guns on again.
	773	130			12:32:35		39.82586	-49.13806	130
	774	131			12:32:42	S	39.82598	-49.13821	131

KNORR 179-07 Hi Res MCS Tape Log

Cruise:	KN179-C1	Channels:	48	Source:	75/75 gain	GT	Reel:	8 sec
Area:	SENE	Sample Rate:	1ms	Shot Int.:	10 sec			

Sheet Number: 61

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
43	774	248	3 Aug 04	216	12:52:15		39.848424	-49.133673	248 Back on line
	774	260			12:54:18	E	39.850288	-49.130568	260
	775	261			12:54:28	S	39.850422	-49.130340	261
	775	340			13:15:58		39.871534	-49.100325	340
	776	391			13:16:08		39.871690	-49.100559	391
	776	520			13:37:38		39.890887	-49.033964	520
	777	521			13:37:48		39.891030	-49.033275	521
	777	650			13:59:17		39.909131	-49.047675	650
	778	651			13:59:27		39.909270	-49.047448	651
	778	780			14:20:57		39.928487	-49.020443	780
	779	781			14:21:07		39.928636	-49.01926	781
	779	910			14:42:37		39.946035	-49.942349	910
	780	911			14:42:47		39.946195	-49.942144	911
	780	1040			15:04:17		39.967715	-49.964361	1040
	781	1041			15:04:22		39.967857	-49.964134	1041
	781	1170			15:25:56		39.927538	-48.936314	1170
	782	1171			15:26:06		39.927698	-48.936103	1171
	782	1300			15:47:36		40.007567	-48.908698	1300
	783	1301			15:47:46		40.007646	-48.908284	1301
	783	1430			16:09:16		40.027197	-48.880302	1430
	784	1431			16:09:26		40.027318	-48.879985	1431
	784	1560			16:30:56		40.046939	-48.852614	1560
	785	1561			16:30:06		40.047412	-48.851780	1561
	785	1690			16:52:36		40.066396	-48.824009	1690
	786	1691			16:52:46		40.066551	-48.823801	1691
	786	1820			17:14:16		40.086285	-48.796028	1820
	787	1821			17:14:26		40.086712	-48.795816	1821
	787	1950			17:35:56	F	40.106124	-48.767640	1950

KNORR 179-02<sup>1</sup> Hi Res MCS Tape Log

Cruise:	KN 179-01	Channels:	48	Source:	75/75 Sec	61
Area:	SEAL	Sample Rate:	1ms	Shot Int.:	10 sec	
				Reel:		9 sec

Sheet Number: 62

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot	Comments
43	788	1951	3 Aug 04	216	17:36:00	S	40.106273	-48.767414	1951	
	788	2086			17:57:27		40.126291	-48.738940	2086	
	789	2681			17:57:47		40.126211	-48.738921	2681	
	789	2210			18:19:17		40.146294	-48.710213	2210	
	790	2211			18:19:23		40.146294	-48.710186	2211	
	790	2340			18:40:58		40.165747	-48.682419	2340	
	791	2341			18:41:07		40.116089	-48.682237	2341	
	791	2470			19:02:37	E	40.145742	-48.659538	2470	
	792	2471			19:02:47	S	40.145606	-48.659710	2471	
	792	2600			19:24:17	E	40.204769	-48.626117	2600	
	793	2601			19:24:27	S	40.204920	-48.626499	2601	
	793	2730			19:45:57	E	40.223875	-48.599530	2730	
	794	2731			19:46:07	S	40.224023	-48.599316	2731	
	794	2860			20:07:37	E	40.242934	-48.572390	2860	
	795	2861			20:07:47	S	40.243086	-48.572184	2861	
	795	2940			20:29:17	E	40.262103	-48.545025	2940	
	796	2941			20:29:27	S	40.262260	-48.544815	2941	
	796	3120			20:50:57	E	40.28191	-48.51663	3120	
	797	3121			20:51:07	S	40.28207	-48.51641	3121	birds moving up/down - low fluise
	797	3250			21:12:37	E	40.301958	-48.487498	3250	
	798	3251			21:12:47	S	40.30211	-48.48758	3251	
	798	3380			21:34:17	E	40.322040	-48.457159	3380	
	799	3381			21:34:27	S	40.322243	-48.458943	3381	
	799	3510			21:55:58	E	40.342232	-48.430316	3510	
	800	3511			21:56:08	S	40.342354	-48.430075	3511	
	800	3640			22:17:38	E	40.362242	-48.410149	3640	
	801	3641			22:17:48	S	40.362391	-48.410457	3641	
	801	3770			22:39:18	E	40.382192	-48.372833	3770	

KNORR 179-02<sup>1</sup> Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 Sec
Area:	SENR	Sample Rate:	1ms.	Shot Int.:	10 Sec.
				Reel Len:	8 sec.

Sheet Number: 63

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
43	802	3771	3 Aug 04	216	22:39:28	S	40.382644	-48.372654	3771	
	802	3900			23:00:58	E	40.102650	-48.343839	3900	
	803	3901			23:01:08	S	40.402812	-48.343620	3901	
	803	4030			23:22:38	E	40.422865	-48.314931	4030	
	804	4031			23:22:48	S	40.423010	-48.314686	4031	
	804	4160			23:44:18	E	40.442785	-48.286280	4160	
	805	4161			23:44:28	S	40.442944	-48.286058	4161	
	805	4290	4 Aug 04	217	00:05:58	E	40.462708	-48.258387	4290	
	806	4291			00:06:08	S	40.462368	-48.258178	4291	
	806	4420			00:27:39	E	40.481659	-48.230710	4420	
	807	4421			00:27:48	S	40.481743	-48.230481	4421	
	807	4550			00:44:18	E	40.501109	-48.202651	4550	
	808	4551			00:44:28	S	40.501221	-48.202452	4551	
	808	4680			01:10:58	E	40.520414	-48.175111	4680	
	809	4681			01:11:08	S	40.520555	-48.174891	4681	
	809	4810			01:32:38	E	40.539682	-48.147344	4810	
	810	4811			01:32:48	S	40.539846	-48.147125	4811	
	810	4940			01:54:18	E	40.558887	-48.119536	4940	
	811	4941			01:54:28	S	40.559037	-48.119336	4941	
	811	5070			02:15:58	E	40.538269	-48.01712	5070	
	812	5071			02:16:08	S	40.538433	-48.016578	5071	
	812	5200			02:37:39	E	40.558060	-48.063352	5200	
	813	5201			02:37:49	S	40.558226	-48.063143	5201	
	813	5330			02:59:17	E	40.61807	-48.03445	5330	
	814	5331			02:59:27	S	40.61821	-48.03452	5331	
	814	5460			03:20:57	E	40.63381	-48.00590	5460	
	815	5461			03:21:07	S	40.63397	-48.00568	5461	
	815	5590			03:42:37	E	40.65715	-48.97718	5590	

KNORR 179-07 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 sec	G.I.
Area:	SENR	Sample Rate:	1 m.	Shot Int.:	10 sec.	
				Reclen:	8 sec.	

Sheet Number: 64

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
43	816	5591	4 Aug	217	3:42:47	S	40.65790	-47.97645	5591	
	816	5720			4:04:17	E	40.67786	-47.94925	5720	
	817	5721			4:04:27	S	40.67804	-47.94803	5721	
	817	5850			4:25:57	E	40.69719	-47.91958	5850	
	818	5851			4:26:07	S	40.69796	-47.91939	5851	
	819	5980			4:43:37	E	40.71778	-47.89105	5980	
	819	5981			4:43:47	S	40.71793	-47.89080	5981	
	819	6110			5:09:17	E	40.75770	-47.86234	6110	
	820	6111			5:09:27	S	40.75785	-47.86212	6111	
	820	6246			5:30:57	E	40.75786	-47.83322	6240	
	821	6241			5:31:07	S	40.75802	-47.83301	6241	
	821	6370			5:52:37	E	40.77822	-47.80349	6370	
	822	6371			5:52:47	S	40.77838	-47.80376	6371	
	822	6500			6:14:18	E	40.79877	-47.77430	6500	
	823	6501			6:14:28	S	40.79892	-47.77405	6501	
	823	6630			6:35:58	E	40.81896	-47.74518	6630	
	824	6631			6:36:08	S	40.81911	-47.74496	6631	
	824	6760			6:57:38	E	40.83907	-47.71621	6760	
	825	6760			6:57:48	S	40.83923	-47.71600	6760	
	825	6890			7:19:18	E	40.85933	-47.68696	6890	
	826	6891			7:19:28	S	40.85949	-47.68674	6891	
	826	7020			7:40:58	E	40.87940	-47.65748	7020	
	827	7021			7:41:08	S	40.87985	-47.65726	7021	
	827	7150			8:02:38	E	40.90704	-47.62815	7150	
	828	7151			8:02:48	S	40.90722	-47.62792	7151	
	828	7280			8:24:18	E	40.92033	-47.59845	7280	
	829	7281			8:24:28	S	40.92048	-47.59872	7281	
	829	7410			8:45:58	E	40.94061	-47.56969	7410	



KNORR 179-07<sup>1</sup> Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/135 sec	GI
Area:	SEAL	Sample Rate:	1 sec	Shot Int.:	10 sec	
				Reel Len:	8 sec	

Sheet Number: 65

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot No	Comments
43	830	7411	4 Aug 04	217	8:46:08	S	40.94076	-47.56945	7411	
	830	7540			9:07:38	E	40.96064	-47.54008	7540	
	831	7541			9:07:49	S	40.96120	-47.53986	7541	
	831	7670			9:29:18	E	40.98179	-47.5012	7670	
	832	7671			9:29:28	S	40.98195	-47.50987	7671	
	832	7800			9:50:58	E	41.00259	-47.48013	7800	
	833	7801			9:51:08	S	41.00274	-47.47990	7801	
	833	7930			10:12:38	E	41.02236	-47.44986	7930	
	834	7931			10:12:48	S	41.02352	-47.44463	7931	
	834	8060			10:34:18	E	41.04396	-47.42022	8060	
	835	8061			10:34:28	S	41.04411	-47.41998	8061	
	835	8190			10:55:59	E	41.06379	-47.39154	8190	
	836	8191			10:56:09	S	41.06394	-47.39137	8191	
	836	8320			11:17:39	E	41.08322	-47.36361	8320	
	837	8321			11:17:49	S	41.08347	-47.36298	8321	
EO445	838	8407			11:42:10		41.10523	-47.35167	8407	EO445
	837	8450			11:39:18	E	41.10274	-47.33526	8450	
	838	8451			11:39:28	S	41.10294	-47.32505	8451	
EO446	838	8527			11:52:05		41.11622	-47.32115	8527	EO446
	838	8580			12:00:58	E	41.12273	-47.34527	8580	
	839	8581			12:01:08	S	41.12283	-47.34514	8581	
	839	8710			12:22:38	E	41.13869	-47.32186	8710	
	840	8711			12:22:48	S	41.13879	-47.32083	8711	
	840	8840			12:44:18	E	41.15194	-47.30939	8840	
	841	8841			12:44:28	S	41.15210	-47.30921	8841	
	841	8970			13:05:58	E	41.17122	-47.42770	8970	
	842	8971			13:06:08	S	41.17196	-47.42798	8971	
EO444	842	9004			13:11:40		41.17629	-47.43506	9004	EO444

KNORR 179-07<sup>1</sup> Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 sec in 67
Area:	SENR	Sample Rate:	1ms	Shot Int.:	10.9 sec
				Reel len:	8 sec

Sheet Number: 66

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Swaths	Comments
			4 Aug 04	217	13:15					Guns off - sample shot 1's
					13:21					Back on line - guns not yet firing - hoping accurate
	842	9022			13:14:38	E	41.176939	-47.440264	6022	
					13:47					System has recovered and - shot #1's correct.
	843	1			13:41:42	S	41.163342	-47.461492	1	
	843	46			13:49:37		41.180521	-47.459421	46	First data shot
	843	130			14:03:37	E	41.174344	-47.443352	130	
	844	131			14:03:47	S	41.174196	-47.442577	131	
	844	157			14:08:07		41.171343	-47.449153	157	SOENIS
	844	260			14:25:12	E	41.149036	-47.460565	260	
	845	261			14:25:27	S	41.148520	-47.460621	261	
	845	390			14:46:57	E	41.121973	-47.474223	390	
	846	291			14:47:07	S	41.121774	-47.474329	291	
	846	520			15:08:37	E	41.094617	-47.488027	520	
	847	521			15:08:47	S	41.094408	-47.488132	521	
	847	585			15:19:22	E	41.081676	-47.494782	585	Compressor turned off - streamer
Blank 45	848	0	5 Aug '01	218	01:06:49	S	41.060829	-47.443164	1	
		2			01:06:52		41.060801	-47.443210	2	+2-86 fm 1st only
		87			01:21:02		41.059516	-47.464335	87	1st shot
	848	130			01:28:12	E	41.052741	-47.474816	130	
	849	131			01:28:22	S	41.052701	-47.475091	131	
	849	260			01:49:52	E	41.049679	-47.526848	260	
	850	261			01:50:02	S	41.049673	-47.527116	261	
	850	390			02:11:53	E	41.042317	-47.555316	390	
	851	391			02:11:43	S	41.042510	-47.555461	391	
	851	570			02:33:13	E	41.037533	-47.511434	570	
	852	521			02:33:24	S	41.037747	-47.511871	521	
	852	650			02:54:53	E	41.041619	-47.479172	650	

brought in for casing

KNORR 179-02 Hi Res MCS Tape Log

Cruise:	K217-01	Channels:	48	Source:	75/75 sec in
Area:	SEN	Sample Rate:	1 ms.	Shot Int.:	10 sec.
				Reel in:	6.7

Sheet Number: 67

Line #	Reel #	File #	Date	ID	Time	Start/End	Latitude	Longitude	Scale #	Comments
return to 15	853	651	5 Aug 64	218	02:55:03	S	41.041367	-47.479166	657	
		735			3:08:01		41.08310	-47.44420	735	back on line 45
		767			3:14:23		41.07645	-47.44731	767	reel back on line 45
		780			3:16:33		41.07383	-47.44857	780	
		781			3:16:43		41.07412	-47.44870	781	
		910			3:38:13		41.04682	-47.51223	910	
		911			3:38:23		41.04662	-47.51232	911	
		1040			3:58:53		41.01949	-47.52578	1040	
		1041			4:00:03		41.01949	-47.52587	1041	
		1170			4:21:33		40.99307	-47.53924	1170	
		1171			4:21:43		40.99282	-47.53931	1171	
		1300			4:43:13		40.96583	-47.55300	1300	
		1301			4:43:23		40.96562	-47.55309	1301	
		1430			5:04:53		40.93912	-47.56624	1430	
		1431			5:05:03		40.93892	-47.56637	1431	
		1560			5:26:13		40.91210	-47.57962	1560	
		1561			5:26:43		40.91241	-47.57970	1561	
		1690			5:48:13		40.88658	-47.59265	1690	
		1691			5:48:23		40.88640	-47.59275	1691	
		1820			6:09:54		40.86056	-47.60571	1820	
		1821			6:10:04		40.86032	-47.60581	1821	
		1950			6:31:34		40.83443	-47.61879	1950	
		1951			6:31:44		40.83424	-47.61889	1951	
		2080			6:53:14		40.80842	-47.63178	2080	
		2081			6:53:24		40.80823	-47.63190	2081	
		2211			7:15:04		40.78205	-47.64504	2210	
		2212			7:15:14		40.78183	-47.64514	2211	
		2341			7:36:44		40.75572	-47.65822	2340	

2091

KNORR 179-07<sup>1</sup> Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 data	GI	
Area:	SEMR	Sample Rate:	1 msec	Shot Int.:	10 sec	Reclen:	8 sec

Sheet Number: 68

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
45	866	2342	5 August 04	218	07:36:54	S	40.75552	-47.65833	2341
	866	2421			7:58:24		40.72943	-47.67132	2420
	867	2422			7:58:34		40.72922	-47.67138	2421
	867	2601			8:20:04		40.70350	-47.68439	2600
	868	2602			8:20:14		40.70330	-47.68452	2601
	868	2731			8:41:44		40.62745	-47.62737	2730
	869	2732			8:41:54		40.62725	-47.62749	2731
	869	2861			9:03:24		40.65163	-47.71021	2860
	870	2862			9:03:34		40.65143	-47.71035	2861
	870	2991			9:25:04		40.62503	-47.72394	2990
	871	2992			9:25:14		40.62483	-47.72355	2991
	871	3121			9:46:44		40.59848	-47.73684	3120
	872	3122			9:46:54		40.59828	-47.73693	3121
	872	3251			10:08:24		40.57213	-47.74944	3250
	873	3252			10:08:34		40.57194	-47.75003	3251
	873	3381			10:30:04		40.54592	-47.76297	3380
	874	3382			10:30:14		40.54572	-47.76307	3381
	874	3511			10:51:44		40.519207	-47.776024	3510
	875	3512			10:51:54	S	40.519505	-47.776185	3511
		3603			11:07:		40.561239	-47.785212	3602 Belt broke on comp. reset
	875	3641			11:13:27	E	40.494594	-47.738318	3640
46 SOL			7 Aug 04	220	13:15:58				SOL 46-Alt yet firing gun
	876	1			12:56:54	S	39.517524	-48.289504	1 First shot
	876	118			12:19:50	E	39.546866	-48.272194	130
	877	119			13:20:01	S	39.5716246	-48.378604	131
	877	249			13:41:39	E	39.567152	-48.351990	260
	878	250			13:41:49	S	39.567321	-48.351785	261
	878	379			14:03:19	E	39.5287271	-48.325151	370

KNORR 179-07<sup>1</sup> Hi Res MCS Tape Log

Cruise:	KN074-01	Channels:	418	Source:	751735sec in	61
Area:	SEN2	Sample Rate:	1ms	Shot Int.:	105sec	
				Reel Len:	8sec	

Sheet Number: 69

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot#	Comments
46	879	380	7 Aug 04	220	14:03:19	S	39.588424	-48.325151	391	
	879	509			14:25:02	E	39.609379	-48.298243	520	
	880	510			14:25:12	S	39.60947	-48.298416	521	
	880	639			14:46:42	E	39.670364	-48.272714	650	
	881	640			14:46:52	S	39.680520	-48.272225	651	
	881	769			15:08:22	E	39.650512	-48.246999	780	
	882	770			15:08:32	S	39.650674	-48.246812	781	
	882	891			15:36:02	E	39.671537	-48.220563	910	
	883	900			15:36:12	S	39.671745	-48.220557	911	
	883	1029			15:51:42	E	39.692530	-48.194612	1040	
	884	1030			15:51:52	S	39.692685	-48.193806	1041	
	884	1157			16:13:19	E	39.713522	-48.163677	1170	File Numbers repeating - something wrong
	885	1156			16:13:32	S	39.713711	-48.167378	1171	Gunshot down
					16:30					Shots Renumbered, minus back on
	885	1217			16:22:58	E	39.723010	-48.155761	1228	
	886	1			16:32:04	S	39.731941	-48.144393	1	
	886	130			16:53:34	E	39.758574	-48.112111	130	
	887	131			16:53:44	S	39.758371	-48.112906	131	
	887	260			17:15:14	E	39.774233	-48.091099	260	
	888	261			17:15:24	S	39.774288	-48.090909	261	Lost shot 311 17:22:412
	888	391			17:37:04	E	39.795225	-48.064634	390	
	889	392			17:37:14	S	39.795381	-48.064412	391	
	889	521			17:58:44	E	39.816211	-48.038416	520	
	890	522			17:58:54	S	39.816375	-48.037539	521	
	890	651			18:00:24	E	39.837138	-48.011957	650	
	891	652			18:20:34	S	39.837300	-48.011548	651	
	891	781			18:42:04	E	39.858064	-47.985434	780	

KNORR 179-02<sup>1</sup> Hi Res MCS Tape Log

Cruise:	KN179-01	Channel:	48	Source:	75/75 Curia	G.I.
Area:	SENR	Sample Rate:	1ms	Shot Int.:	10sec	
						Reel: 8 sec

Sheet Number: 70

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	SLT*	Comments
46	842	782	7 Aug 64	220	16:42:19	S	39.88230	-47.985233	781	
	842	911			19:05:44	E	39.878417	-47.959029	910	
	843	912			19:05:54	S	39.874080	-47.958833	911	
	843	1041			19:25:25	E	39.879834	-47.932645	1040	
	844	1042			19:25:35	S	39.844949	-47.932443	1041	
	844	1171			19:47:05	E	39.920714	-47.906341	1170	
	845	1172			19:47:15	S	39.920883	-47.906126	1171	
	845	1301			20:08:15	E	39.941543	-47.878857	1300	
	846	1302			20:08:55	S	39.941702	-47.878652	1301	Host chain's energized but
	846	1431			20:30:25	E	39.962404	-47.853533	1430	Ch 1's 3 are using noisy.
	847	1432			20:30:35	S	39.962575	-47.853330	1431	
	847	1561			20:52:05	E	39.983303	-47.927096	1560	
	848	1562			20:50:15	S	39.953461	-47.826864	1561	
	848	1691			21:13:15	E	40.001302	-47.800533	1690	
	849	1692			21:13:55	S	40.004455	-47.800325	1691	
	849	1821			21:35:25	E	40.025095	-47.771220	1820	
	900	1822			21:35:35	S	40.025245	-47.774028	1821	
	900	1951			21:57:05	E	40.045544	-47.748284	1950	
	901	1952			21:57:15	S	40.045695	-47.748053	1951	
	901	2081			22:18:45	E	40.066270	-47.721945	2080	
	902	2082			22:18:55	S	40.066433	-47.721783	2081	
	902	2211			22:40:25	E	40.087274	-47.665476	2210	
	903	2212			22:40:35	S	40.087381	-47.665769	2211	2234 no return from OYO
	903	2342			23:02:15	E	40.108444	-47.668611	2341	
	904	2343			23:02:25	S	40.108604	-47.668411	2342	
	904	2472			23:23:52	E	40.124434	-47.644844	2471	
	905	2473			23:24:06	S	40.124631	-47.644682	2472	
	905	2602			23:45:36	E	40.150564	-47.615112	2601	

KNORR 179-02 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	3175 down	Reel em:	8 sec
Area:	SEAN R	Sample Rate:	125	Shot Int.:	10 sec		

Sheet Number: 71

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
46	906	2603	7 May 04	220	23:45:46	S	40.150745	-47.614713	2601	
	906	2732	8 May 04	221	00:07:16	E	40.171624	-47.588370	2730	
	907	2733			00:07:26	S	40.171745	-47.588174	2731	
	907	2862			00:28:52	E	40.142402	-47.662054	2860	
	908	2863			00:29:06	S	40.142562	-47.661853	2861	
	908	2942			00:50:36	E	40.213508	-47.535243	2940	
	909	2943			00:50:46	S	40.212675	-47.535038	2941	
	109	3122			01:12:15	E	40.235728	-47.507867	3120	
	910	3123			01:12:25	S	40.235286	-47.507650	3121	
	910	3252			01:32:55	E	40.256117	-47.481146	3250	
	911	3253			01:39:05	S	40.262747	-47.480433	3251	
	911	3382			01:55:35	E	40.277056	-47.454480	3380	
	912	3383			01:55:45	S	40.277231	-47.454281	3381	
	912	3512			02:17:15	E	40.298883	-47.428054	3510	
	913	3513			02:17:25	S	40.298034	-47.427842	3511	
	913	3642			02:38:55	E	40.318675	-47.401445	3640	
	914	3643			02:39:05	S	40.318837	-47.401235	3641	Noise on channels 1, 3, 20
	914	3772			03:00:34	E	40.329603	-47.345016	3770	
	915	3773			03:00:44	S	40.329455	-47.344803	3771	
	915	3902			3:12:14	E	40.360838	-47.347938	3900	
	916	3903			3:12:24	S	40.361006	-47.347724	3901	
	916	4032			3:43:55	E	40.382284	-47.326511	4030	
	917	4033			3:44:05	S	40.382444	-47.326360	4031	
	917	4162			4:05:35	E	40.402611	-47.293421	4160	
	918	4163			4:05:45	S	40.403382	-47.293222	4161	
	918	4292			4:27:15	E	40.424628	-47.266718	4290	
	919	4293			4:27:25	S	40.424740	-47.266466	4291	
	919	4422			4:48:55	E	40.445848	-47.239616	4420	

KNORR 179-02 HI Res MCS Tape Log

Cruise:	KN174-01	Channels:	48	Source:	75/45 curd GI
Area:	SEASIDE	Sample Rate:	1ms	Shot Int.:	105sec
				Reel em:	8 sec

Sheet Number: 72

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
46	920	4423	8 Aug '64	221	04:49:05	S	40.446003	47.23444	4421
	920	4552			5:10:35	E	40.462112	47.212522	4550
	921	4553			5:10:45	S	40.462276	47.212310	4551
	921	4682			5:32:15	E	40.464412	47.185432	4680
	922	4683			5:32:25	S	40.468541	47.185229	4681
	922	4812			5:53:55	E	40.509543	47.158420	4810
	923	4813			5:54:05	S	40.509754	47.158212	4811
	923	4942			6:15:35	E	40.530933	47.131172	4940
	924	4943			6:15:45	S	40.534082	47.130950	4941
	924	5072			6:37:15	E	40.552107	47.104050	5070
	925	5073			6:37:25	S	40.552274	47.103844	5071
	925	5202			6:58:55	E	40.533706	47.076451	5200
	926	5203			6:59:05	S	40.535867	47.076239	5201
	926	5332			7:20:36	E	40.595160	47.049102	5330
	927	5333			7:20:46	S	40.595339	47.048999	5331
	927	5462			7:42:16	E	40.616122	47.022553	5460
	928	5463			7:42:26	S	40.616283	47.022347	5461
	928	5592			8:03:56	E	40.636656	47.996442	5590
	929	5593			8:04:06	S	40.636811	47.996250	5591
	929	5722			8:25:36	E	40.657425	47.969836	5720
	930	5723			8:25:46	S	40.657632	47.969644	5721
	930	5852			8:47:16	E	40.678058	46.943303	5850
	931	5853			8:47:26	S	40.678222	46.943566	5851
	931	5982			9:08:56	E	40.698556	46.912131	5980
	932	5983			9:09:06	S	40.698713	46.912005	5981
	932	6112			9:30:36	E	40.719244	46.890623	6110
	933	6113			9:30:46	S	40.719406	46.890449	6111
	933	6242			9:52:16	E	40.740375	46.863659	6240



KNORR 179-02<sup>1</sup> Hi Res MCS Tape Log

Cruise:	KN174-01	Channels:	48	Source:	75/45 sec	Reel:	GI
Area:	SE02	Sample Rate:	1 ms	Shot Int.:	10 sec	Reel:	8 sec

Sheet Number: 73

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
46	934	6243	Aug '64	211	09:52.26	S	40.740544	46.863459	6244
	934	6372			10:13:56	E	40.761607	46.836719	6370
	935	6373			10:14:06	S	40.761722	46.836506	6371
	935	6502			10:35:36	E	40.782853	46.804593	6500
	936	6503			10:35:46	S	40.783019	46.804380	6501
EO246					10:51:50				EO246 Shots being reset
					10:53:06				Last shot
					10:54:50				Around corner - back on line, guns not firing
	936	6607			10:58:06	E	40.799596	46.782195	6605
	937	1			10:57:15	S	40.800450	46.724987	1
50647	937	61			11:07:15		40.792803	46.766688	61 First shot from gun 50647
	937	130			11:18:45	E	40.782850	46.749882	130
	938	131			11:18:55	S	40.782710	46.749648	131
	938	260			11:40:26	E	40.764466	46.720518	260
	939	261			11:40:36	S	40.764272	46.720291	261
	939	390			12:02:06	E	40.7415741	46.69055	390
	940	391			12:02:16	S	40.741573	46.690735	391
	940	520			12:23:15	E	40.722681	46.661442	520
	941	521			12:23:55	S	40.722485	46.661212	521
	941	654			12:16:05	E	40.708654	46.681140	654
	942	655			12:16:15	S	40.708514	46.680912	655
	942	784			13:09:45	E	40.690331	46.601804	784
	943	785			13:09:55	S	40.690187	46.601575	785
	943	914			13:09:25	E	40.671004	46.572597	914
	944	915			13:29:35	S	40.672020	46.572786	915
	944	1044			13:51:05	E	40.653816	46.543211	1044
	945	1045			13:51:15	S	40.653672	46.543014	1045
47	945	1174			14:12:45	E	40.635466	46.513847	1174

Low freq noise all the way on file.

KNORR 179-02 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 Sec	CT
Area:	SENR	Sample Rate:	1ms	Shot Int.:	10sec	
				Reclen:	8Sec	

Sheet Number: 741

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Slvct	Comments
417	946	1175	8 August 09	221	14:12:55	S	40.635385	-46.513665	1175	
	946	1304			14:34:25	E	40.617400	-46.412485	1304	
	947	1305			14:34:35	S	40.617260	-46.412467	1305	
	947	1434			14:56:05	E	40.599324	-46.455943	1434	
	947	1435			14:56:15	S	40.599182	-46.455627	1435	
	948	1504			15:17:44	E	40.581302	-46.412669	1504	
	949	1505			15:17:54	S	40.581278	-46.412640	1505	
	949	1694			15:39:25	E	40.563534	-46.392391	1694	
	950	1695			15:39:35	S	40.563398	-46.392162	1695	
	950	1824			16:01:05	E	40.545070	-46.368849	1824	
	951	1825			16:01:15	S	40.544926	-46.368626	1825	
	951	1954			16:22:45	E	40.526561	-46.339244	1954	
	952	1955			16:22:55	S	40.526117	-46.339014	1955	
	952	2094			16:44:25	E	40.508391	-46.306963	2094	
	953	2095			16:44:35	S	40.508169	-46.306746	2095	
	953	2214			17:06:05	E	40.490017	-46.290692	2214	
	954	2215			17:06:15	S	40.489877	-46.290404	2215	
	954	2344			17:27:45	E	40.465029	-46.272543	2344	
	955	2345			17:27:55	S	40.462860	-46.272285	2345	EOL 417
EOL 417										
506418	955	2364			17:31:04		40.416083	-46.276174	2364	506418
	955	2174			17:49:25	E	40.414656	-46.296805	2174	
	956	2175			17:49:35	S	40.414626	-46.297001	2175	No return on OYC at 25341
	956	2605			18:11:15	E	40.405750	-46.321333	2605	
	957	2606			18:11:25	S	40.405591	-46.321534	2605	
	957	2735			18:32:55	E	40.410431	-46.346275	2735	
	958	2736			18:33:05	S	40.410445	-46.346435	2735	
	958	2865			18:51:36	E	40.393040	-46.370855	2864	

KNORR 179-02' Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	7/25/04	G.I.
Area:	SENR	Sample Rate:	1ms	Shot Int.:	10 sec	
						Reclen: 8 sec

Sheet Number: 75

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Start #	Comments
478	959	2866	8 Aug '04	221	18:54:46	S	40.382877	-116.371047	2865	
	959	2995			19:14:11	E	40.361397	-116.395706	2994	
	960	2996			19:16:26	S	40.361228	-116.395900	2995	
	960	3125			19:33:56	E	40.339488	-116.421164	3124	
	961	3126			19:38:06	S	40.339327	-116.421371	3125	
	961	3255			19:59:36	E	40.317452	-116.446451	3254	
	962	3256			19:59:46	S	40.317274	-116.446622	3255	
	962	3385			20:21:16	E	40.285726	-116.441649	3384	
	963	3386			20:21:26	S	40.285534	-116.441863	3385	Chen 1, 2c are noisy - low F
	963	3515			20:42:56	E	40.273180	-116.447456	3514	
	964	3516			20:43:06	S	40.273001	-116.447657	3515	
	964	3645			21:04:36	E	40.244933	-116.524735	3644	
	965	3646			21:04:46	S	40.244755	-116.524536	3645	
	965	3775			21:26:16	E	40.222218	-116.550940	3774	
	966	3776			21:26:26	S	40.222039	-116.551134	3775	
	966	3905			21:47:56	E	40.206279	-116.575210	3904	
	967	3906			21:48:06	S	40.206113	-116.575397	3905	
	967	4035			22:09:36	E	40.184916	-116.544762	4034	
	968	4036			22:09:46	S	40.184756	-116.544958	4035	
	968	4165			22:31:16	E	40.163138	-116.625021	4164	
	969	4166			22:31:26	S	40.162963	-116.625214	4165	
	969	4295			22:52:57	E	40.141125	-116.650501	4294	
	970	4296			22:53:07	S	40.140957	-116.650699	4295	
	970	4425			23:14:36	E	40.119056	-116.676027	4424	
	971	4426			23:14:46	S	40.118884	-116.676225	4425	
	971	4555			23:36:16	E	40.096858	-116.701751	4554	
	972	4556			23:36:26	S	40.096688	-116.701933	4555	
	972	4685			23:57:56	E	40.074345	-116.722587	4684	

KNORR 179-02

Hi Res

MCS

Tape

Log

Sheet Number: 76

Cruise:	66079-01	Channels:	48	Source:	75/45 sec. in	C.T.				
Area:	SENE	Sample Rate:	1 ms.	Shot Int.:	10 sec.	Reclen:	Rate.			
Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Grid #	Comments
48	973	4686	8 Aug 04	221	23:58:06	S	40.074174	-46.727799	4685	
	973	4815	9 Aug 04	222	00:19:36	E	40.051533	-46.753728	4814	
	974	4816			00:19:46	S	40.051352	-46.753942	4815	
	974	4945			00:41:16	E	40.029073	-46.774334	4944	
	975	4946			00:41:26	S	40.028908	-46.774540	4945	
	975	5075			01:02:56	E	40.007247	-46.804975	5074	
	976	5076			01:03:06	S	40.007081	-46.805463	5075	
	976	5205			01:24:36	E	39.985676	-46.830141	5204	
	977	5206			01:24:46	S	39.985522	-46.830316	5205	
	977	5335			01:46:15	E	39.964389	-46.854799	5334	
	978	5336			01:46:25	S	39.964202	-46.854980	5335	
	978	5465			02:07:55	E	39.943382	-46.874278	5464	
	979	5466			02:08:05	S	39.943225	-46.874465	5465	
	979	5595			02:28:35	E	39.922744	-46.903282	5594	
	980	5596			02:29:45	S	39.922635	-46.903461	5595	
	980	5725			02:51:16	E	39.901672	-46.927903	5724	
	981	5726			02:51:26	S	39.901462	-46.928108	5725	
	981	5855			03:12:56	E	39.880401	-46.952400	5854	
	982	5856			03:13:06	S	39.880245	-46.952542	5855	
	982	5985			03:34:36	E	39.858688	-46.977218	5984	
48	983	5986			03:34:46	S	39.858722	-46.977419	5985	
49	983	5988			03:38:06		39.858400	-46.977499	5987	Start Turn at EOL 48
	983	6030			03:42:06		39.855840	-46.988886	6029	End Turn at BOL 48
	983	6115			3:56:16	E	39.862754	-47.011344	6114	Area COG 2900
	984	6116			3:56:26	S	39.862833	-47.011656	6115	
	984	6245			4:17:56	E	39.843182	-47.045298	6244	
	985	6246			4:18:06	S	39.843264	-47.046071	6245	
	985	6375			4:39:36	E	39.883672	-47.080244	6374	

Sheet Number: 76

KNORR 179-02<sup>1</sup> Hi Res MCS Tape Log

Cruise:	KN179-01	Channel:	48	Source:	75/75 du in GT
Area:	SENR	Sample Rate:	1 us/sec	Shot Int.:	10 sec
				Reel in:	8 sec

Sheet Number: 77

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
49	986	6376	9 August	722	04:39:46	S	39.883755	47.080552	6375
	986	6505			5:01:16	E	39.384336	47.115193	6504
	987	6506			5:01:26	S	39.894413	47.115434	6505
	987	6635			5:22:56	E	39.904984	47.150053	6634
	988	6636			5:23:06	S	39.905073	47.150315	6635
	988	6765			5:44:36	E	39.915524	47.184793	6764
	989	6766			5:44:46	S	39.915617	47.185058	6765
	989	6845			6:06:16	E	39.926122	47.219727	6844
	990	6846			6:06:26	S	39.926212	47.220203	6845
	990	7025			6:27:56	E	39.936609	47.254674	7024
	991	7026			6:28:06	S	39.936690	47.254436	7025
	991	7136			6:49:46	E	39.942291	47.284539	7134
	992	7137			6:49:56	S	39.942382	47.284600	7135
	992	7286			7:11:26	E	39.952993	47.323836	7284
	993	7287			7:11:36	S	39.958071	47.324105	7285
	993	7416			7:33:07	E	39.968441	47.358401	7414
	994	7417			7:33:17	S	39.968533	47.358669	7415
	994	7546			7:54:47	E	39.978878	47.392885	7544
	995	7547			7:54:57	S	39.978956	47.393165	7545
	995	7626			8:16:22	E	39.989525	47.422939	7624
	996	7627			8:16:37	S	39.989604	47.422923	7625
	996	7806			8:38:07	E	40.000281	47.463421	7804
	997	7807			8:38:17	S	40.000363	47.463688	7805
	997	7936			8:59:47	E	40.010916	47.498676	7934
	998	7937			8:59:57	S	40.010988	47.498952	7935
	998	8066			9:21:27	E	40.021529	47.533789	8064
	999	8067			9:21:37	S	40.021662	47.534255	8065
	999	8196			9:43:07	E	40.032366	47.569465	8194

6th row channels.

Navigation from Uyo at shot 7033

Rain squalls, 7-8 knot wind

Ch 26 looks noisy. Please

KNORR 179-02 Hi Res MCS Tape Log

Cruise:	KN174-01	Channels:	48	Source:	75/75 sec	GT
Area:	SENR	Sample Rate:	1 sec	Shot Int.:	10 sec	Reclen:

Sheet Number: 78

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
49	1000	8197	9 August	222	9:43:07	S	40.032366	47.568465	845
	1000	8326			10:04:47	E	40.043142	47.605002	with 12000s at 2460
	1001	8327			10:04:57	S	40.043207	47.605779	8324
	1001	8456			10:26:27	E	40.053842	47.640309	8305
	1002	8457			10:26:37	S	40.053917	47.640584	8454
	1002	8586			10:48:07	E	40.064552	47.675634	8455
	1003	8587			10:48:17	S	40.064621	47.675707	8584
	1003	8714			11:04:30	E	40.075604	47.710668	8585
	1003	8716			11:04:47	E	40.075637	47.711204	8712
	1004	8717			11:04:57	S	40.075637	47.711488	8714
	1004	8752			11:15:47	E	40.078243	47.721078	8715
									8750
									Course off
Line 49 is not	1005	1	11 August 01	224	00:24:08	S	40.063717	47.673263	1
Reel 105		2			00:23:50		40.063637	47.672970	2
is not on	1005	130	Not on tape		00:45:10	E	40.071178	47.697966	make sure all is well, nothing of gun
Tape 1	1006	131	over 5600 disk		00:45:20	S	40.071262	47.698730	130
		131	File		00:49:10		40.073113	47.704465	131
		178			00:53:11		40.075765	47.711144	178
	1006	260			01:06:51	E	40.081858	47.733278	at point of first 8712 like above
	1007	261			01:07:01	S	40.081537	47.733561	260
	1007	390			01:28:31	E	40.092475	47.768336	261
	1008	391			01:28:41	S	40.092564	47.768609	390
	1008	520			01:50:11	E	40.103281	47.804037	391
	1009	521			01:50:21	S	40.103360	47.804318	520
	1009	650			02:11:51	E	40.114432	47.840788	521
	1010	651			02:12:01	S	40.114511	47.841211	650
	1010	780			02:33:31	E	40.125377	47.877577	651
									Cham 38 not seg
									870

Shot No

Region line 49 ending just to make sure all is well, nothing of gun

KNORR 179-02<sup>1</sup> Hi Res MCS Tape Log

Cruise:	KN 179-01	Channels:	48	Source:	75/95 cu in	6 I.
Area:	SENR	Sample Rate:	1 ms.	Shot Int.:	10 sec.	
					Reclen:	8 sec.

Sheet Number: 79

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
49	1011	781	11 August 04	224	02:53:41	S	40.125612	-47.87857	781	
	1011	910			02:55:11	E	40.136437	47.91366	910	
	1012	911			02:55:21	S	40.136523	47.912950	911	
	1012	1040			03:16:51	E	40.147386	47.944804	1040	
	1013	1041			03:17:01	S	40.147466	47.950152	1041	
	1013	1170			03:38:31	E	40.158241	47.985764	1170	
	1014	1171			03:38:41	S	40.158353	47.986031	1171	
	1014	1300			4:00:11	E	40.168057	48.021628	1300	
	1015	1301			4:00:21	S	40.168145	48.021901	1301	
	1015	1430			4:21:51	E	40.179936	48.057150	1430	2,3,4,20,26,23 dead
	1016	1431			4:22:01	S	40.180014	48.057931	1431	
	1016	1560			4:43:32	E	40.190804	48.093680	1560	
	1017	1561			4:43:42	S	40.190894	48.093951	1561	
	1017	1690			5:05:18	E	40.201776	48.124909	1690	
	1018	1691			5:05:21	S	40.201861	48.120191	1691	
	1018	1820			5:26:52	E	40.212682	48.16058	1820	
	1019	1821			5:27:02	S	40.212755	48.16326	1821	
	1019	1950			5:48:32	E	40.223596	48.202779	1950	
	1020	1951			5:48:42	S	40.223687	48.202573	1951	
	1020	2080			6:10:12	E	40.234581	48.238759	2080	
	1021	2081			6:10:22	S	40.234655	48.239047	2081	
	1021	2210			6:31:52	E	40.244939	48.273243	2210	
	1022	2211			6:32:02	S	40.245019	48.273508	2211	
	1022	2340			6:53:32	E	40.255436	48.302975	2340	
	1023	2341			6:53:42	S	40.255491	48.308233	2341	
	1023	2470			7:15:12	E	40.265806	48.342525	2470	
	1024	2471			7:15:22	S	40.265905	48.342794	2471	
	1024	2600			7:36:51	E	40.276292	48.37767	2600	

KNORR 179-07<sup>1</sup> Hi Res MCS Tape Log

Cruise:	KU174-01	Channels:	48	Source:	75/75' 2nd
Area:	SENR	Sample Rate:	1 ms	Shot Int.:	10 sec
				Reel:	8 sec

Sheet Number: 80

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	#	Comments
49	1025	2600	11 August 04	224	07:37:01	S	40.241345	48.372433	2600	
	1025	2730			7:58:31	E	40.286681	48.411492	2730	
	1026	2731			7:58:41	S	40.286755	48.412043	2731	
	1026	2860			8:20:10	E	40.287197	48.446247	2860	
	1027	2861			8:20:20	S	40.287272	48.447064	2861	
	1027	2990			8:41:50	E	40.307734	48.481811	2990	
	1028	2991			8:42:00	S	40.307817	48.482083	2991	
	1028	3120			9:03:30	E	40.318335	48.512044	3120	
	1029	3121			9:03:40	S	40.318422	48.517314	3121	
	1029	3250			9:25:11	E	40.328818	48.551965	3250	
	1030	3251			9:25:21	S	40.328844	48.552241	3251	
	1030	3380			9:46:51	E	40.334442	48.587375	3380	
	1031	3381			9:47:01	S	40.334561	48.587460	3381	
	1031	3510			10:08:31	E	40.350242	48.623019	3510	
	1032	3511			10:08:41	S	40.350317	48.623259	3511	No return from Dye at slit 3535 at 10:12:41
	1032	3641			10:30:21	E	40.361063	48.658952	3640	
	1033	3642			10:30:31	S	40.361142	48.659231	3641	
	1033	3771			10:52:01	E	40.371727	48.694471	3770	
	1034	3772			10:52:11	S	40.371812	48.6947254	3771	No return from Dye at slit 3799 at 10:55:33
	1034	3902			11:13:51	E	40.392552	48.730417	3900	
	1035	3903			11:14:01	S	40.392641	48.730711	3901	
	1035	4032			11:35:31	E	40.397228	48.766217	4030	
	1036	4033			11:35:41	S	40.397308	48.766484	4031	
	1036	4162			11:57:11	E	40.403954	48.801757	4160	
	1037	4163			11:57:21	S	40.404033	48.802019	4161	
	1037	4292			12:18:51	E	40.414546	48.837203	4290	
	1038	4293			12:19:01	S	40.414624	48.837483	4291	
	1038	4422			12:40:31	E	40.425159	48.872520	4420	

Shot

guided streamer



KNORR 179-02 <sup>1</sup> Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	418	Source:	75175 Sec in 61
Area:	SENIR	Sample Rate:	1ms	Shot Int.:	10 sec
				Reclen:	85 sec

Sheet Number: 81

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Start	Comments
419	1039	4423	11 August 04	224	12:40:41	S	40.425239	-48.872784	41421	
	1039	4552			13:02:12	E	40.435359	-48.906369	41550	
	1040	4553			13:02:22	S	40.435429	-48.906969	41551	
	1040	4682			13:22:52	E	40.445577	-48.940509	41680	
	1041	4683			13:24:02	S	40.445655	-48.940701	41681	
	1041	4812			13:45:32	E	40.456658	-48.975615	41810	
	1042	4813			13:45:42	S	40.456137	-48.975888	41811	
	1042	4942			14:07:12	E	40.465749	-49.012315	41940	
	1042	4943			14:07:22	S	40.465793	-49.012597	41941	
	1043	5072			14:28:52	E	40.475299	-49.048191	5070	
	1044	5072			14:29:02	S	40.475370	-49.048460	5071	
	1044	5202			14:50:32	E	40.486024	-49.084164	5200	
	1045	5203			14:50:42	S	40.486107	-49.084447	5201	
EC449		5286			15:04:30		40.493039	-49.103507	5284	EC449
504.50		5291			15:05:25		40.493673	-49.108783	5289	504.50
	1045	5322			15:12:12	E	40.499125	-49.118509	5330	
	1046	5323			15:12:22	S	40.499313	-49.118757	5331	
	1046	5462			15:33:52	E	40.516405	-49.149364	5410	
	1047	5463			15:34:02	S	40.516524	-49.149603	5461	
	1047	5562			15:55:32	E	40.533281	-49.179490	5550	
	1048	5563			15:55:42	S	40.533420	-49.179716	5591	
	1048	5722			16:17:12	E	40.550516	-49.210182	5720	
	1049	5723			16:17:22	S	40.550654	-49.210411	5721	
	1049	5852			16:38:52	E	40.567865	-49.241176	5850	
	1050	5853			16:39:02	S	40.568010	-49.241402	5851	
	1050	5982			17:00:33	E	40.585002	-49.271866	5980	
	1051	5983			17:00:43	S	40.585142	-49.272027	5981	
	1051	6112			17:22:11	E	40.601960	-49.302101	6110	

KNORR KN179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 cm. I.T.
Area:	SENR	Sample Rate:	1ms	Shot Int.:	10 sec
				Reclen:	8 sec

Sheet Number: 82

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Alt	Comments
50	1052	6113	11 August 04	2201	17:22:21	S	40.602090	-49.302330	6111	
	1052	6242			17:43:51	E	40.619650	-49.332587	6240	
	1053	6203			17:44:01	S	40.619186	-49.332596	6241	
	1053	6373			18:05:31	E	40.636284	-49.363406	6370	
	1054	6323			18:05:41	S	40.636412	-49.363654	6371	
	1054	6562			18:27:11	E	40.653529	-49.394287	6560	
	1055	6563			18:27:21	S	40.653653	-49.394512	6561	
	1055	6632			18:48:51	E	40.670685	-49.425015	6630	
	1056	6633			18:49:01	S	40.670811	-49.425266	6631	
	1056	6762			19:10:31	E	40.688373	-49.456624	6760	
	1057	6763			19:10:41	S	40.688305	-49.456878	6761	
	1057	6942			19:32:11	E	40.706005	-49.488147	6940	
	1058	6843			19:32:21	S	40.706145	-49.488414	6841	
	1058	7022			19:53:51	E	40.725817	-49.520101	7020	
	1059	7023			19:54:01	S	40.725950	-49.520346	7021	
	1059	7152			20:15:31	E	40.741149	-49.551024	7150	
	1060	7153			20:15:41	S	40.741286	-49.551263	7151	
	1060	7282			20:37:11	E	40.758494	-49.582119	7280	
	1061	7283			20:37:21	S	40.758636	-49.582344	7281	
	1061	7112			20:58:52	E	40.785560	-49.612605	7110	
	1062	7113			20:59:02	S	40.785697	-49.612837	7111	
	1062	7512			21:20:32	E	40.742984	-49.643848	7510	
	1063	7513			21:20:42	S	40.743125	-49.644090	7511	
	1063	7672			21:42:12	E	40.810539	-49.675135	7670	
	1064	7673			21:42:22	S	40.810660	-49.675373	7671	
	1064	7802			22:03:52	E	40.828000	-49.706421	7800	
	1065	7803			22:04:02	S	40.828136	-49.706660	7801	
	1065	7932			22:25:32	E	40.845536	-49.738338	7930	

KNORR KN179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	3516 sec	C.I.
Area:	SENR	Sample Rate:	1 sec	Shot Int.:	10 sec	
						Reel em: 83

Sheet Number: 83

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
50	1066	7935	11 Aug '01	224	22:25:42	S	40.845666	-49.738095	7931	
	1066	8012			22:47:12	E	40.863621	-49.769210	8060	
	1067	8063			22:47:22	S	40.863167	-49.769448	8061	
	1067	8142			23:08:52	E	40.880519	-49.880560	8190	
	1068	8193			23:09:02	S	40.880662	-49.880803	8191	
	1068	8322			23:30:32	E	40.892938	-49.831889	8320	
	1069	8323			23:30:42	S	40.898080	-49.832128	8321	
	1069	8452			23:52:12	E	40.915403	-49.863198	8450	
	1070	8453			23:52:22	S	40.915550	-49.863430	8451	
	1070	8582	12 Aug '01	225	00:13:52	E	40.932862	-49.894582	8580	
	1071	8583			00:14:02	S	40.933002	-49.894816	8581	
	1071	8712			00:35:32	E	40.950340	-49.925701	8710	
	1072	8713			00:35:42	S	40.950479	-49.926136	8711	
	1072	8842			00:57:12	E	40.962823	-49.952361	8840	
	1073	8843			00:57:22	S	40.962957	-49.952612	8841	
	1073	8972			01:19:53	E	40.985335	-49.988787	8970	
	1074	8973			01:19:03	S	40.985475	-49.989029	8971	
	1074	9102			01:40:33	E	41.002842	-50.020261	9100	
	1075	9103			01:40:43	S	41.002974	-50.020445	9101	
	1075	9232			02:02:13	E	41.019627	-50.050042	9230	
	1076	9233			02:02:23	S	41.019735	-50.050184	9231	
End 50	1076	9240			02:03:53		41.020552	-50.051065	9238	in turn End 50
	1076	9248			02:04:53	E	41.021572	-50.051942	9246	1st shot object large reel
	1077	1			02:08:38	S	41.024735	-50.053360	1	cycling through gun firing
51	1077	99			02:24:58		41.034765	-50.036145	99	1st shot on line 3 and speed
	1078	130			02:30:08	E	41.038083	-50.027943	130	
	1078	131			02:30:18	S	41.038183	-50.027712	131	
	1078	260			02:51:48	E	41.052100	-49.993323	260	

# KNORR KN179-01 Hi Res MCS Tape Log

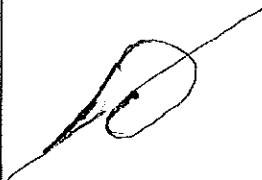
Cruise:	KN179-01	Channels:	48	Source:	35135000	6.1.
Area:	SENR	Sample Rate:	1ms	Shot Int.:	10 sec	
				Reel in:	8	

Sheet Number: 84

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Surf *	Comments
51	1079	261	12 Aug 84	225	3:51:58	5	41.052217	49.993062	261	
	1079	390			3:13:28		41.06127	49.958780	390	
	1080	391			3:13:38		41.06249	49.958513	391	
	1080	520			3:35:08		41.080240	49.923925	520	
	1081	521			3:35:18		41.080341	49.923701	521	
	1081	650			3:56:48		41.094270	49.889444	650	
	1082	651			3:56:58		41.094377	49.889202	651	
	1082	780			4:18:28		41.108124	49.855376	780	
	1083	781			4:18:38		41.108224	49.855110	781	
	1083	910			4:40:08		41.121825	49.821672	910	
	1084	911			4:40:18		41.121933	49.821414	911	
	1084	1040			5:01:48		41.135615	49.787367	1040	Chau 2, 3, 4 are dead
	1085	1041			5:01:58		41.135722	49.787207	1041	No 60 Hz noise on 3
	1085	1170			5:23:28		41.149301	49.753885	1170	
	1086	1171			5:23:38		41.149403	49.753615	1171	Chau 1 noisy
	1086	1300			5:45:08		41.163140	49.719740	1300	
	1087	1301			5:45:18		41.163237	49.719470	1301	
	1087	1430			6:06:48		41.177085	49.685278	1430	2 to 4 kts.
	1088	1431			6:06:58		41.177193	49.685014	1431	0.2 to slowed to make turn
	1088	1534			6:29:08		41.187362	49.659431	1534	Begin turn EOL 51
	1088	1554			6:28:18		41.187061	49.655503	1554	End turn Roll 52
51	1088	1560			6:28:28		41.185108	49.653332	1560	
52	1089	1561			6:28:38		41.185359	49.653144	1561	d/c to 1430
	1089	1640			6:50:07		41.164026	49.631855	1640	
	1090	1641			6:50:17		41.163856	49.631688	1641	
	1090	1820			7:11:47		41.140877	49.609580	1820	
	1091	1821			7:11:57		41.140402	49.609385	1821	
	1091	1950			7:35:27		41.116722	49.587038	1950	

2614

KNORR KN179-01 Hi Res MCS Tape Log



Cruise:	KN179-01	Channels:	48	Source:	75/75 rate	GI
Area:	SENV12	Sample Rate:	1 MSec	Shot Int.:	10 Sec	
				Reel in:	8 Sec	

Sheet Number: 85

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
52	1092	1951	12 August	225	7:33:37	S	41.116547	49.586865	1951
	1092	2080			7:55:02	E	41.083533	49.504485	2080
	1093	2081			7:55:12	S	41.043351	49.514815	2081
	1093	2210			8:16:47	E	41.070675	49.543239	2210
	1094	2211			8:16:57	S	41.070502	49.543072	2211
	1094	2340			8:38:27	E	41.044653	49.501457	2340
	1095	2341			8:38:37	S	41.044493	49.501290	2341
	1095	2369			8:43:17		41.042586	49.516650	2369 gun off, dolphins last shot
	1095	2380			8:45:02		41.040670	49.514773	2380 Begin loop
	1095	2470			9:00:02	E	41.038040	49.500376	2470
	1096	2471			9:00:17	S	41.038811	49.500968	2471
	1096	2560			9:15:08		41.050828	49.502360	2560 1st shot still in turn.
	1096	2600			9:21:49	E	41.040907	49.524061	2600
	1097	2601			9:21:58	S	41.040800	49.524182	2601
	1097	2614			9:24:08		41.038962	49.520172	2614 still off line straight
	1097	2646			9:29:28		41.033670	49.511024	2646 close to live parallel course
	1097	2730			9:43:28	E	41.018824	49.494073	2730
	1098	2731			9:43:38	S	41.018643	49.493903	2731
	1098	2853			10:03:58		40.996207	49.473151	2853 Begin turn EOL 52
52	1098	2860			10:05:08	E	40.995518	49.471435	2860
53	1099	2861			10:05:18	S	40.995371	49.471718	2861
	1099	2880			10:08:28		40.994407	49.466604	2880 End turn BOL 53
	1099	2940			10:26:48	E	41.003458	49.438467	2940
	1100	2941			10:26:58	S	41.003373	49.438317	2941
	1100	3120			10:48:28	E	41.022502	49.406039	3120
	1101	3121			10:48:38	S	41.022619	49.405827	3121
	1101	3250			11:10:08	E	41.037965	49.372720	3250
	1102	3251			11:10:18	S	41.038075	49.372457	3251

KNORR KNI79-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 cur	CI
Area:	SENR	Sample Rate:	1 m sec	Shot Int.:	10 sec	Reclen: 8 sec

Sheet Number: 86

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	#	Comments
53	1102	3386	12 August 84	225	11:31:48	E	41.0533331	-49.339085	3386	
	1103	3381			11:31:58	S	41.053349	-49.338831	3381	
	1103	3510			11:53:28	E	41.068825	-49.305422	3510	
	1104	3511			11:53:38	S	41.068949	-49.305106	3511	
	1104	3640			12:15:08	E	41.084293	-49.231313	3640	
	1105	3641			12:15:18	S	41.084329	-49.231456	3641	
	1105	3770			12:36:48	E	41.099753	-49.238116	3770	
	1106	3771			12:36:58	S	41.099872	-49.237976	3771	
	1106	3900			12:58:28	E	41.115278	-49.204306	3900	
	1107	3901			12:58:38	S	41.115397	-49.204099	3901	
	1107	4030			13:20:09	E	41.130594	-49.171104	4030	
	1108	4031			13:20:19	S	41.130716	-49.170847	4031	
	1108	4160			13:41:49	E	41.145801	-49.138228	4160	
	1109	4161			13:41:59	S	41.145936	-49.137974	4161	
	1109	4290			14:03:29	E	41.161000	-49.104719	4290	
	1110	4291			14:03:39	S	41.161118	-49.104468	4291	
	1110	4420			14:25:09	E	41.176155	-49.071833	4420	
	1111	4421			14:25:19	S	41.176253	-49.071585	4421	
	1111	4550			14:46:49	E	41.191154	-49.039208	4550	
	1112	4551			14:46:59	S	41.191272	-49.038978	4551	
	1112	4680			15:08:29	E	41.206363	-49.005808	4680	
	1113	4681			15:08:39	S	41.206483	-49.005603	4681	
	1113	4810			15:30:09	E	41.221559	-48.972697	4810	
	1114	4811			15:30:19	S	41.221692	-48.972458	4811	
	1114	4940			15:51:49	E	41.236474	-48.940150	4940	
	1115	4941			15:51:59	S	41.236602	-48.935759	4941	
	1115	5070			16:13:29	E	41.251666	-48.907113	5070	
	1116	5071			16:13:39	S	41.251791	-48.906874	5071	

Sheet

KNORR KN179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75sec	CF	
Area:	SENE	Sample Rate:	1m5	Shot Int.:	10sec	Reclen:	85cc

Sheet Number: 87

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	#	Comments
53	1116	5260	12 Aug '04	225	16:35:09	E	41.266703	-48.873893	5260	
	1117	5261			16:35:19	S	41.266927	-48.873651	5261	
	1117	5330			16:56:29	E	41.281823	-48.841674	5330	
	1118	5331			16:56:59	S	41.281944	-48.840816	5331	
	1118	5460			17:18:29	E	41.296911	-48.808258	5460	
	1119	5461			17:18:39	S	41.297020	-48.808005	5461	
	1119	5590			17:40:08	E	41.311934	-48.775463	5590	
	1120	5591			17:40:18	S	41.312046	-48.775185	5591	
	1120	5720			18:01:48	E	41.326978	-48.742475	5720	
	1121	5721			18:01:58	S	41.327092	-48.742235	5721	
	1121	5850			18:23:28	E	41.341203	-48.709655	5850	
	1122	5851			18:23:38	S	41.342125	-48.709414	5851	
	1122	5980			18:45:08	E	41.357102	-48.676501	5980	
	1123	5981			18:45:18	S	41.357223	-48.676657	5981	
	1123	6110			19:06:48	E	41.372279	-48.644057	6110	
	1124	6111			19:06:58	S	41.372398	-48.643802	6111	
	1124	6240			19:28:28	E	41.387243	-48.611235	6240	
	1125	6241			19:28:38	S	41.387362	-48.610983	6241	
	1125	6370			19:50:08	E	41.402223	-48.579472	6370	
	1126	6371			19:50:18	S	41.402347	-48.579212	6371	
End 53	1126	6779			19:51:38		41.403266	-48.576140	6779	begin turn SOL 53
SOL 54	1126	6408			19:56:28		41.402078	-48.568551	6408	SOL 54 no return photo shot 6413
	1126	6501			20:11:58	E	41.385500	-48.551767	6500	
	1127	6502			20:12:08	S	41.385313	-48.551566	6501	Navig Chans 19, 26
	1127	6631			20:33:38	E	41.361612	-48.522617	6630	
	1128	6632			20:33:48	S	41.361433	-48.522421	6631	
	1128	6761			20:55:18	E	41.337911	-48.503401	6760	

Sheet

KNORR KN179-01 Hi Res MCS Tape Log

Cruise:	KN179-01	Channels:	48	Source:	75/75 kHz GI
Area:	SENR	Sample Rate:	1 mS	Shot Int.:	10 sec
				Reel:	8 sec

Sheet Number: 88

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Comments
SY	1124	6762	12 Aug '04	225	20:55:28	S	41.337735	-48.503720	6761
EOL SY	1129	6770			20:58:14		41.336265	-48.501744	6769 EOL SY half-turn
	1129	6773			20:59:18	E	41.335697	-48.50167	6772
	1130	1			21:00:34	S	41.332027	-48.501409	1 cycle start #1-3
SOL #55	1130	4			21:01:04		41.331714	-48.501866	4 first start SOL #55
	1130	130			21:22:04	E	41.312996	-48.528238	130
	1131	131			21:22:14	S	41.312830	-48.528439	131
	1131	260			21:43:14	E	41.293062	-48.555999	260
	1132	261			21:47:54	S	41.292911	-48.556219	261 No return from 010 start 356
	1132	391			22:05:34	E	41.272832	-48.584166	390
	1133	392			22:05:44	S	41.272692	-48.584384	391 noiseg ch 1,9
	1133	521			22:27:14	E	41.252306	-48.612741	520
	1134	522			22:27:24	S	41.252114	-48.612952	521
	1134	651			22:48:51	E	41.231901	-48.641128	650
	1135	652			22:49:04	S	41.231751	-48.641352	651
	1135	781			23:10:54	E	41.211416	-48.669419	780
	1136	782			23:10:44	S	41.211266	-48.669638	781
	1136	911			23:32:14	E	41.191115	-48.697803	910
	1137	912			23:32:24	S	41.190955	-48.698004	911
	1137	1011			23:53:54	E	41.171530	-48.724845	1040
	1138	1042			23:54:04	S	41.171375	-48.725099	1041
	1138	1171	13 Aug '04	226	00:15:34	E	41.151404	-48.752969	1170
	1139	1172			00:15:44	S	41.151244	-48.753199	1171
	1139	1301			00:37:14	E	41.130871	-48.781473	1300
	1140	1302			00:37:24	S	41.130720	-48.781685	1301
	1140	1431			00:59:54	E	41.111364	-48.808748	1430
	1141	1432			00:59:04	S	41.111224	-48.808757	1431
	1141	1561			01:20:35	E	41.092026	-48.835448	1560



KNORR KNI79-01 Hi Res MCS Tape Log

Cruise:	KNI79-01	Channels:	48	Source:	75/35000	6.I.
Area:	SENA	Sample Rate:	1ms	Shot Int.:	10sec	
				Reclen:	8sec	

Sheet Number: 89

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
SS	1142	1562	13 Apr '04	226	01:20:45	S	41.091881	-118.835628	1561	
	1142	1691			01:42:15	E	41.072893	-118.821927	1690	
	1143	1692			01:42:25	S	41.072756	-118.822136	1691	
EOL #55	1143	1810			02:02:05		41.054453	-118.846775	1809	EOL #55, begin turn
	1143	1821			02:03:55	E	41.053060	-118.848797	1820	
	1144	1822			02:04:05	S	41.052869	-118.848940	1821	
SOL #52	1144	1895			02:16:15		41.041844	-118.840003	1894	SOL #52, on line & up to speed.
	1144	1951			02:25:35	E	41.038952	-118.844914	1950	
	1145	1952			02:25:45	S	41.038840	-118.844641	1951	
	1145	2081			02:47:15	E	41.032651	-118.829590	2080	
	1146	2082			02:47:25	S	41.032601	-118.829299	2081	
	1146	2211			3:08:54	E	41.025970	-118.742449	2210	
	1147	2212			3:09:54	S	41.025940	-118.742222	2211	
	1147	2341			3:30:34	E	41.019534	-118.755396	2340	
	1148	2342			3:30:44	S	41.019499	-118.755092	2341	
	1148	2471			3:52:14	E	41.013142	-118.718429	2470	
	1149	2470			3:52:24	S	41.013149	-118.718158	2471	
	1149	2601			4:13:54	E	41.006741	-118.681224	2600	
	1150	2602			4:14:04	S	41.006742	-118.681477	2601	
	1150	2731			4:35:34	E	41.000524	-118.644535	2730	
	1151	2732			4:35:44	S	41.000481	-118.644257	2731	
	1151	2861			4:57:14	E	40.993932	-118.603514	2860	
	1152	2862			4:57:24	S	40.993941	-118.603226	2861	
	1152	2991			5:18:54	E	40.987360	-118.530093	2990	
	1153	2992			5:19:04	S	40.987209	-118.529808	2991	
	1153	3121			5:40:34	E	40.980559	-118.532867	3120	
	1154	3122			5:40:44	S	40.980716	-118.532577	3121	Notturn from Day at slt 3158
	1154	3252			6:02:24	E	40.944110	-118.446371	3250	05:46:44

KNORR KN179-01 Hi Res MCS Tape Log

Cruise:	15N 174-01	Channels:	48	Source:	75/75 sec	GI	
Area:	SEAR	Sample Rate:	1 sec	Shot Int:	10 sec	Reel len:	8 sec

Sheet Number: 90

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Alt	Comments
56	1155	3253	13 Aug 04	226	06:02:34	S	40.934055	-48.44094	3251	
	1155	3382			06:24:04	E	40.967208	48.460561	3380	
	1156	3383			06:24:14	S	40.967650	48.46088	3381	
	1156	3512			06:45:44	E	40.961182	48.423886	3510	
	1157	3513			06:45:54	S	40.961127	48.423602	3511	
	1157	3642			7:02:124	E	40.954804	48.386597	3640	
	1158	3643			7:02:34	S	40.954748	48.386307	3641	
	1158	3772			7:29:04	E	40.948045	48.349815	3770	
	1159	3773			7:29:04	S	40.947946	48.349521	3771	
	1159	3902			7:50:44	E	40.941449	48.313082	3900	On 21.00.59
	1160	3903			7:50:54	S	40.941380	48.312803	3901	
	1160	4032			8:12:24	E	40.934840	48.274121	4030	No return from Dyo at slt 4137
	1161	4033			8:12:34	S	40.934782	48.275833	4031	08:28:14
	1161	4163			8:34:14	E	40.928175	48.238937	4160	
	1162	4164			8:34:24	S	40.928134	48.238655	4161	
	1162	4293			8:55:54	E	40.921665	48.202247	4290	
	1163	4294			8:56:04	S	40.921610	48.201968	4291	
	1163	4423			9:12:34	E	40.915046	48.165883	4420	
	1164	4424			9:12:44	S	40.915040	48.165603	4421	
	1164	4553			9:39:15	E	40.908650	48.129413	4550	
	1165	4554			9:39:25	S	40.908594	48.108514	4551	No return from Dyo at slt 4580
	1165	4683			10:00:55	E	40.902044	48.092116	4680	09:43:45
	1166	4684			10:01:05	S	40.901945	48.091825	4681	
	1166	4813			10:22:35	E	40.895267	48.054390	4810	
	1167	4814			10:22:45	S	40.895224	48.054160	4811	
	1167	4943			10:44:15	E	40.888552	48.016310	4940	
	1168	4944			10:44:25	S	40.888504	48.016518	4941	
	1168	5073			11:05:55	E	40.882065	47.980062	5070	

KNORR KNI79-01 Hi Res MCS Tape Log

Cruise:	KNI79-01	Channels:	48	Source:	75/75cc in	CC
Area:	S2VLR	Sample Rate:	1ms	Shot Int.:	10sec	
				Reclen:	8sec	

Sheet Number: 91

Line #	Reel #	File #	Date	JD	Time	Start/End	Latitude	Longitude	Shot #	Comments
56	1169	5074	13Aug 84	226	11:06:05	S	40.882210	-47.929277	5071	
	1169	5203			11:23:35	E	40.875314	-47.928199	5200	
	1170	5204			11:24:45	S	40.875255	-47.942206	5201	
	1170	5333			11:49:15	E	40.868591	-47.905208	5330	
	1171	5334			11:49:35	S	40.868533	-47.905000	5331	
	1171	5463			12:10:55	E	40.861825	-47.867029	5460	
	1172	5464			12:11:05	S	40.861720	-47.866755	5461	
	1172	5593			12:32:35	E	40.855609	-47.829332	5590	
	1173	5594			12:32:45	S	40.854959	-47.829643	5591	No return from 070 at shot 5643
	1173	5724			12:54:25	E	40.848207	-47.791022	5720	
	1174	5725			12:54:35	S	40.848142	-47.790730	5721	No return from 070 at shot 5846
	1174	5855			13:16:15	E	40.841261	-47.751872	5850	
	1175	5856			13:16:25	S	40.841187	-47.751531	5851	
	1175	5985			13:37:55	E	40.834209	-47.712924	5980	
	1176	5986			13:38:05	S	40.834207	-47.712647	5981	
	1176	6115			13:59:35	E	40.827363	-47.674360	6110	
	1177	6116			13:59:45	S	40.827310	-47.674105	6111	
	1177	6245			14:21:15	E	40.820472	-47.636473	6240	
	1178	6246			14:21:25	S	40.820432	-47.635834	6241	
EOC 56	1178	6316			14:33:05	E	40.816781	-47.615841	6311	EOC 56

13:13:33

12:17:13

following seas: low F stronger  
noise