

## Appendix IV - Tides and Water Levels

Abstract of Times of Hydrography for Smooth Tides

Project Number: OPR-K977-FU-08

Registry Number: H11806

Contractor Name: Fugro Pelagos Inc.

Date: June 19, 2009

Sheet Letter: C

Inclusive Dates: August 16, 2008 and ended on April 3, 2009

Fieldwork is complete and verified tides were applied for the production of the final soundings, BASE surface, and S-57 feature file.

### Abstract of Times of Hydrography for R/V Chinook (SBES)

YEAR	DAY	START TIME (UTC)	END TIME (UTC)	COMMENTS
2008	229	13:39:14	14:45:55	
2008	230	14:04:47	17:19:48	
2008	231	12:05:26	21:53:25	
2008	232	12:31:50	21:19:30	
2008	233	11:45:13	21:26:10	
2008	234	12:27:31	22:04:55	
2008	235	11:57:36	18:51:20	
2008	239	12:06:27	22:15:59	
2008	240	11:47:17	20:00:38	
2008	241	11:52:45	21:50:22	
2008	281	13:26:52	16:19:15	
2008	308	19:00:25	22:12:28	
2008	313	12:58:53	22:09:46	
2008	318	13:15:07	21:45:23	
2008	321	15:37:16	22:28:01	
2008	323	13:11:38	14:52:10	
2008	330	19:15:03	22:20:24	
2008	332	13:18:08	13:55:21	
2008	332	21:44:00	22:18:01	
2008	333	15:41:07	20:27:07	
2008	334	13:13:14	13:28:57	
2008	337	12:33:27	22:58:00	
2008	341	12:36:15	21:50:04	
2008	342	12:45:55	22:45:44	
2008	347	13:24:57	16:28:53	
2008	347	17:44:30	22:57:33	
2008	348	1:06:56	8:30:12	

2008	350	22:53:24	23:59:59	
2008	351	0:00:00	3:57:43	
2008	351	13:19:40	22:26:07	
2008	352	1:28:21	10:57:01	
2008	352	13:19:30	23:34:21	
2008	353	1:02:01	10:36:40	
2008	353	13:21:07	22:28:16	
2008	354	0:25:34	5:18:21	
2008	354	12:50:14	21:56:55	
2008	355	0:23:23	9:44:59	
2008	355	13:10:36	22:13:44	
2008	356	0:37:57	4:42:39	
2008	364	14:01:30	14:16:59	
2008	364	19:45:34	22:51:51	
2008	365	12:43:51	22:30:28	
2008	366	12:55:08	15:51:22	
2009	2	12:44:23	22:45:30	
2009	3	12:57:07	20:10:26	
2009	4	0:23:06	6:45:22	
2009	4	18:46:21	22:29:37	
2009	5	1:00:49	10:25:38	
2009	5	13:29:21	22:42:33	
2009	6	1:11:35	2:31:46	
2009	7	18:23:51	21:58:04	
2009	8	12:48:43	1:53:14	
2009	9	12:34:40	19:21:08	
2009	13	13:49:26	18:18:02	
2009	28	0:54:17	4:56:36	
2009	29	23:00:33	1:06:05	
2009	30	22:51:40	1:26:02	
2009	32	0:35:19	5:55:57	
2009	45	0:18:40	0:23:23	
2009	46	0:29:59	2:26:46	
2009	89	0:31:21	0:41:09	
2009	93	23:15:50	23:56:52	

## Abstract of Times of Hydrography for R/V Locator (SBES)

YEAR	DAY	START TIME (UTC)	END TIME (UTC)	COMMENTS
2008	229	21:11:24	21:46:34	
2008	230	11:53:12	12:23:09	
2008	230	13:58:53	21:05:09	
2008	231	12:44:45	21:23:06	
2008	232	12:55:51	16:24:31	
2008	232	17:56:48	21:19:28	
2008	233	12:23:31	21:49:00	
2008	234	12:02:21	22:09:12	
2008	235	11:44:40	18:47:33	
2008	236	12:00:01	15:58:24	
2008	239	11:44:37	21:48:15	
2008	240	11:57:18	20:27:21	
2008	241	11:54:12	20:52:13	
2008	306	20:20:59	21:38:00	
2008	314	12:46:10	22:12:07	
2008	318	12:57:46	21:50:07	
2008	319	13:25:10	20:55:57	
2008	322	12:53:04	21:22:12	
2008	324	13:00:10	21:55:01	
2008	331	12:41:06	22:09:35	
2008	332	12:43:51	22:11:32	
2008	333	12:58:00	14:16:12	
2008	333	15:39:15	21:09:33	
2008	337	16:49:37	22:02:16	
2008	341	18:22:06	22:08:15	
2008	342	13:23:45	22:15:35	
2008	347	13:47:43	22:38:03	
2008	351	13:32:47	22:01:27	
2008	352	13:15:12	22:27:24	
2008	353	12:56:32	22:46:24	
2008	354	13:43:27	22:50:17	
2008	355	13:06:22	20:15:16	
2009	9	18:21:36	20:30:20	
2009	14	13:44:26	18:25:55	
2009	14	20:28:52	23:09:00	
2009	15	13:34:32	20:36:38	

2009	24	16:02:54	21:38:27	
2009	25	18:59:33	19:39:01	
2009	26	12:57:44	15:35:24	
2009	27	12:51:26	16:20:43	
2009	30	18:51:57	20:53:02	
2009	31	19:43:33	21:55:39	
2009	32	12:58:21	19:52:11	
2009	34	13:17:29	15:38:05	
2009	34	21:19:07	21:59:49	
2009	36	12:51:31	13:43:33	
2009	89	13:01:29	13:13:52	
2009	89	14:17:27	15:31:21	

### Abstract of Times of Hydrography for R/V Locator (MBES)

YEAR	DAY	START TIME (UTC)	END TIME (UTC)	COMMENTS
2008	290	19:46:47	21:12:30	
2008	294	13:08:15	16:09:49	
2008	329	14:07:56	18:13:47	
2008	337	14:27:44	15:49:44	
2008	341	14:23:47	16:48:39	
2008	365	15:40:04	19:32:07	
2009	22	13:42:31	15:13:54	