

Technical University of Denmark
Danish Institute for Fisheries Research

Survey	Cruise leader	Date of depart	Date of arrival
NS Sandeel-survey	Dirk C. Tijssen	12/11-2009	05/12-2009



Sand ell survey December/November 2009

DTU AQUA
Charlottenlund Slot
Jægersborg Allé 1
DK-2920 Charlottenlund

tel: +4535883300
fax: +4535883333

e-mail: aqua@aqua.dtu.dk
www.aqua.dtu.dk
CVR-nr. 30060946
EAN-nr. 5798000877313

1 Part:

Dirk C. Tijssen – DTU AQUA, Nordsøen Forskerpark, Postboks 101, 9850 Hirtshals

Commercial vessel; L151 "Pernille Kim

Background

Since 2004 DTU Aqua (former DIFRES) has used a modified scallop dredge to measure the relative abundance of sand ell in the seabed. The survey is conducted in November/December when the 0-group sand ells have been recruited to the adult population and the whole population is assumed to reside in the seabed.

Four different dredges have been used in the survey: DK1 standard dredge; DK2 Modified standard dredge with video camera and a bottom contact; DK3 Modified standard dredge with additional net roof; DF1 modified standard dredge with additional net. As the DF 1 dredge was used at an experimental basis only and analysis indicated that the DK3 dredge had catch rates significantly different from the DK1 and DK2, in the present only data from DK2 was used (DK1 only as back-up). These two dredges obtained similar catch rates and therefore their data was aggregated in the analysis.

Since 2004 in total 828 hauls were made with the four dredges of which 790 were made with DK1 and DK2 (Table 1). As indicated in Table 1 and Figur 1, the dredge survey covers Areas 1 and 3 except for 7 hauls taken in Area 2 in 2005. The data from Area 2 are not included in the present analysis.

Sampling is carried out at fixed positions on known sand ell habitats at some of the most important fishing banks in the North Sea from the little Fisher Bank in the North Eastern North Sea, to de Dogger Bank Area in the South Western North Sea (Figure 1). In 2006 additional positions were sampled in the Norwegian EEZ.

The 2 Positions on Off South Jutland some had priority 0, was not fishing in 2008/2009

Purpose of the survey

- To sample sand ells with a modified mussel dredge on the commercial vessel Pernille Kim L151. Collection of samples will be on the station locations stated in Table 1 and on which positions the survey has been conducted since 2003 with the same gear. Positions in the Norwegian economic zone (marked as dark Blue in Table 1) has been made available by the Institute of Marine Research in Norway
- To test a newly developed mussel dredge and to conduct further investigations on the catchability of gears
- To compare the catch levels and the compositions on the catch (age groups, weight and length) with former years survey to estimate the year class strength of the 2009 year-class.
- To identify practical problems in connection with sampling of sand ells from fishing vessels and to try to find solutions.

Number of samples on each position

On every position (stated in Table 1) 1 sediment sample are conducted with a Van Veen 0.2 m² bottom sampler. Thereafter 3 hauls are conducted with the modified mussel dredge (DK2) on the same position. Hauls are conducted within a radius of 0.3 nm from the planned position.

There where taken 3 new positions on the dry part of Dogger Bank. Every new position where taken 5 sediment samples with the Van Veen 0.2 m² and 5 hauls with the mussel dredge (DK2).

The 2009 survey:

- 12 days at sea
- 45 positions (42 positions with 3 hauls, 3 positions of 5 hauls, positions 4264-05 and 4264-03 non sand ell at all)
- 231 sand ell samples
- 34 sediment samples

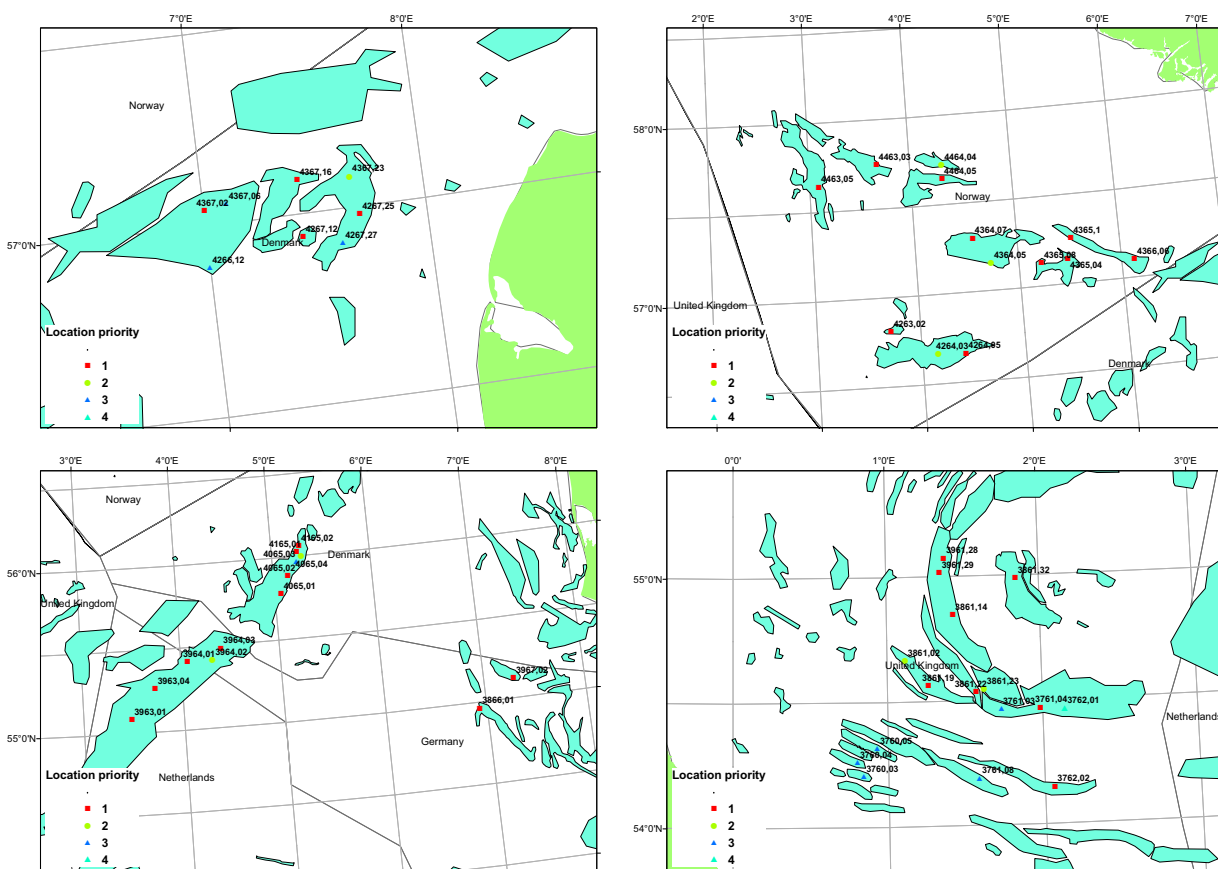


Fig. 1 Map showing the sampling locations in the 2009 sand ell survey with L151 "Pernille Kim" in the four subareas (Little Fisher, Norwegian EEZ, Tail End/ South of Judland and Dogger Bank)

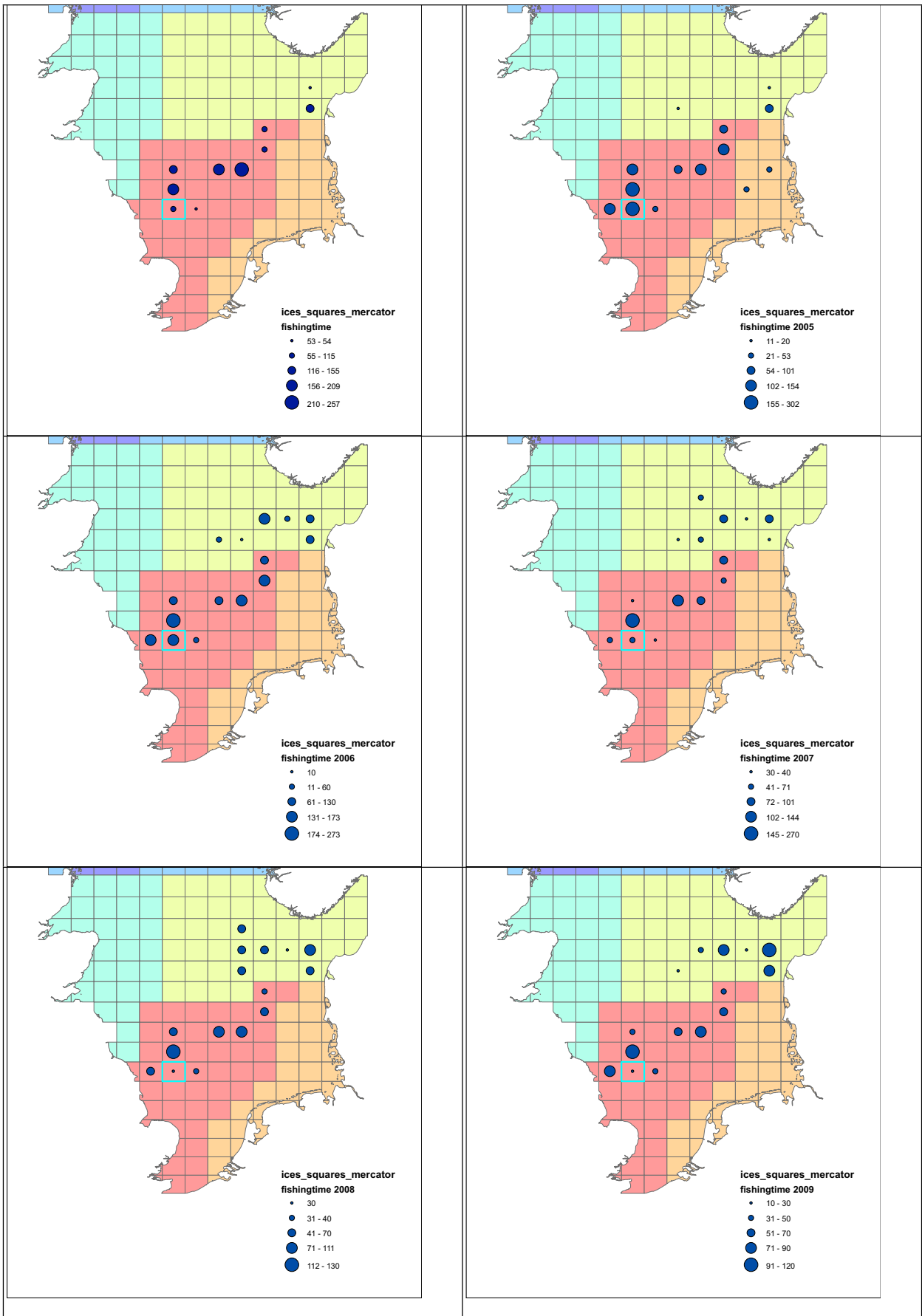


Fig. 2 Rates of sand ell from 2004 till 2009 on the different areas

Table 1 all positions

Dato	Pos nr	St nr	tool	Start UTC	Slut UTC	Start longitude	Start latitude	final longitude	final latitude	depth	remarks
24/11	3964-03	1	v Veen	15:05	X	04 25 17Ø	55 28 95N			30	
24/11	3964-03	2	DK2	15:17	15:27	04 24 22Ø	55 28 99N	04 25 00Ø	55 29 03N	30	bottom contact not started
24/11	3964-03	3	DK2	15:39	15:49	04 24 87Ø	55 28 90N	04 24 34Ø	55 29 10N	30	
24/11	3964-03	4	DK2	15:57	16:07	04 24 60Ø	55 29 16N	04 24 61Ø	55 28 80N	29	
24/11	3964-02	5	v Veen	17:16	X	04 18 84Ø	55 25 06N			33	
24/11	3964-02	6	DK2	17:30	17:40	04 19 18Ø	55 24 78N	04 18 80Ø	55 25 00N	33	non camera
24/11	3964-02	7	DK2	17:49	17:59	04 19 16Ø	55 25 16N	04 18 90Ø	55 24 83N	32	
24/11	3964-02	8	DK2	18:06	18:16	0418 74Ø	55 24 93N	04 19 46Ø	55 25 01N	32	
24/11	3964-01	9	v Veen	19:52	X	04 04 11Ø	55 25 22N			27	
24/11	3964-01	10	DK2	20:02	20:12	04 04 52Ø	55 25 10N	04 03 86Ø	55 25 13N	27	non camera
24/11	3964-02	11	DK2	20:21	20:31	04 03 98Ø	55 25 36N	04 03 96Ø	55 25 01N	27	
24/11	3964-02	12	DK2	20:38	20:48	04 03 78Ø	55 25 07N	04 04 40Ø	55 25 36N	28	
25/11	3761-08	13	V VEEN	22:30		01 34 75Ø	54 11 40N			29	
25/11	3761-08	14	DK2	22:41	22:51	01 34 95Ø	54 11 50N	01 34 60Ø	54 11 23N	29	non camera
25/11	3761-08	15	DK2	23:02	23:12	01 34 60Ø	54 11 22N	01 35 25Ø	54 11 40N	29	
25/11	3761-08	16	DK2	23:23	23:33	01 35 07Ø	54 11 27N	01 34 52Ø	54 11 39N	29	
26/11	3760-03	17	v veen	16:53		00 47 84Ø	54 12 89 N			37	
26/11	3760-03	18	dk2	17:06	17:16	00 48 13 Ø	54 12 76 N	00 47 82 Ø	54 13 07 N		non camera
26/11	3760-03	19	dk2	17:24	17:34	00 48 27 Ø	54 13 13 N	00 47 83 Ø	54 12 89 N		
26/11	3760-03	20	dk2	17:44	17:54	00 47 78 Ø	54 12 98 N	00 48 30 Ø	54 12 85 N		
26/11	3760-04	21	v veen	18:24		00 47 89 Ø	54 15 25 N			41	
26/11	2760-04	22	dk2	18:35	18:45	00 48 19 Ø	54 15 92 N	00 47 80 Ø	54 15 53 N		camera in pieces
26/11	3760-04	23	dk2	18:55	19:05	00 47 70 Ø	54 15 75 N	00 48 36 Ø	54 15 69 N		
26/11	3760-04	24	dk2	19:14	19:24	00 48 15 Ø	54 15 56 N	00 47 91 Ø	54 15 89 N		
26/11	3760-05	25	v veen	20:10		00 55 63 Ø	54 18 99 N			48	
26/11	3760-05	26	dk2	20:20	20:30	00 56 00 Ø	54 19 02 N	00 55 44 Ø	54 18 87 N		
26/11	3760-05	27	dk2	20:39	20:49	00 55 53 Ø	54 19 01 N	00 56 06 Ø	54 18 85 N		

26/11	3760-05	28	dk2	20:57	21:07	00 55 73 Ø	54 18 80 N	00 55 79 Ø	54 19 12 N		bottom contact lost of the frame
26/11	3861-19	29	v veen	23:30		01 16 01 Ø	54 34 00 N			25	
26/11	3861-19	30	dk2	23:38	23:48	01 16 10 Ø	54 33 88 N	01 15 67 Ø	54 34 16 N		
26/11	3861-19	31	dk2	23:57	00:07	01 16 05 Ø	54 34 19 N	01 15 68 Ø	54 33 91 N		
27/11	3861-19	32	dk2	00:15	00:25	01 15 61 Ø	54 34 00 N	01 16 29 Ø	54 34 05 N		
27/11	3861-22	33	v veen	01:38		01 34 44 Ø	54 32 22 N			24	
27/11	3861-22	34	dk2	01:48	01:58	01 34 50 Ø	54 32 16 N	01 34 11 Ø	54 32 42 N		
27/11	3861-22	35	dk2	02:06	02:16	01 34 47 Ø	54 32 45 N	01 34 15 Ø	54 32 16 N		
27/11	3861-22	36	dk2	02:19	02:29	01 34 08 Ø	54 32 27 N	01 34 65 Ø	54 32 31 N		
27/11	3861-23	37	v veen	02:50		01 37 38 Ø	54 32 70 N			19	7 stk TBM
27/11	3861-23	38	dk2	02:59	03:09	01 37 65 Ø	54 32 84 N	01 37 19 Ø	54 32 63 N		
27/11	3861-23	39	dk2	03:18	03:28	01 37 17 Ø	54 32 76 N	01 37 79 Ø	54 32 71 N		
27/11	3861-23	40	dk2	03:35	03:45	01 37 54 Ø	54 32 56 N	01 37 25 Ø	54 32 80 N		
27/11	3762-02	41	v veen	16:01		02 03 55 Ø	54 08 97 N			25	
27/11	3762-02	42	dk2	16:18	16:28	02 03 85 Ø	54 98 84 N	02 03 33 Ø	54 09 03 N		
27/11	3762-02	43	dk2	16:34	16:44	02 03 62 Ø	54 09 08 N	02 03 72 Ø	54 08 72 N		
27/11	3762-02	44	dk2	16:52	17:02	02 03 40 Ø	54 08 84 N	02 03 81 Ø	54 09 24 N		
27/11	3761-04	45	v veen	19:11		01 59 07 Ø	54 28 12 N			16	
27/11	3761-04	46	dk2	19:18	19:28	01 59 22 Ø	54 27 92 N	01 58 81 Ø	54 28 17 N		
27/11	3761-04	47	dk2	19:35	19:45	01 59 02 Ø	54 28 19 N	01 59 00 Ø	54 27 84 N		
27/11	3761-04	48	dk2	19:53	20:03	01 58 78 Ø	54 27 99 N	01 59 28 Ø	54 28 14 N		
27/11	3762-01	49	v veen	21:06		02 08 18 Ø	54 27 41 N			14	
27/11	3762-01	50	dk2	21:14	21:24	02 08 57 Ø	54 27 28 N	02 08 04 Ø	54 27 46 N		
27/11	3762-01	51	dk2	21:30	21:40	02 08 21 Ø	54 27 53 N	02 08 54 Ø	54 27 57 N		
27/11	3762-01	52	dk2	21:47	21:57	02 08 17 Ø	54 27 28 N	02 08 54 Ø	54 27 57 N		
27/11	2009-01	53	v veen	22:56		02 08 82 Ø	54 34 92 N			17	
27/11	2009-01	54	v veen	22:58		02 08 93 Ø	54 34 93 N			17	
27/11	2009-01	55	v veen	23:00		02 08 97 Ø	54 34 93 N			17	

27/11	2009-01	56	v veen	23:03		02 08 99 Ø	54 34 93 N			17	
27/11	2009-01	57	v veen	23:05		02 09 09 Ø	54 34 91 N			17	
27/11	2009-01	58	dk2	23:13	23:23	02 09 08 Ø	54 34 85 N	02 08 75 Ø	54 35 17 N		
27/11	2009-01	59	dk2	23:34	23:44	02 09 11 Ø	54 35 17 N	02 08 68 Ø	54 34 85 N		
27/11	2009-01	60	dk2	23:52	00:02	02 08 62 Ø	54 34 95 N	02 09 20 Ø	54 35 02 N		
28/11	2009-01	61	dk2	00:10	00:20	02 09 19 Ø	54 34 99 N	02 08 57 Ø	54 35 02 N		
28/11	2009-01	62	dk2	00:27	00:37	02 08 95 Ø	54 35 10 N	02 08 90 Ø	54 34 80 N		
28/11	2009-02	63	v veen	02:35		01 59 40 Ø	54 50 48 N			21	
28/11	2009-02	64	v veen	02:38		01 59 46 Ø	54 50 50 N			21	
28/11	2009-02	65	v veen	02:40		01 59 54 Ø	54 50 50 N			21	
28/11	2009-02	66	v veen	02:43		01 59 60 Ø	54 50 50 N			21	
28/11	2009-02	67	v veen	02:45		01 59 69 Ø	54 50 50 N			21	
28/11	2009-02	68	dk2	02:52	03:02	01 59 75 Ø	54 50 36 N	01 59 36 Ø	54 50 67 N		2 tbm i v veen
28/11	2009-02	69	dk2	03:08	03:18	01 59 67 Ø	54 5074 N	01 59 45 Ø	54 50 37 N		
28/11	2009-02	70	dk2	03:26	03:36	01 59 30 Ø	54 50 43 N	01 59 80 Ø	54 50 66 N		2 tbm i v veen
28/11	2009-02	71	dk2	03:42	03:52	01 59 93 Ø	54 50 57 N	01 59 25 Ø	54 50 49 N		
28/11	2009-02	72	dk2	03:59	04:09	01 59 23 Ø	54 50 59 N	01 59 84 Ø	54 50 48 N		2 tbm i v veen
28/11	3861-32	73	v veen	05:20		01 50 84 Ø	54 59 32 N			23	
28/11	3861-32	74	dk2	05:29	05:39	01 50 82 Ø	54 59 50 N	01 50 91 Ø	54 59 13 N		
28/11	3861-32	75	dk2	05:45	05:55	01 50 55 Ø	54 59 17 N	01 51 04 Ø	54 59 43 N		
28/11	3861-32	76	dk2	06:02	06:12	01 51 23 Ø	54 59 31 N	01 50 55 Ø	54 59 28 N		
28/11	3861-14	77	v veen		16:12	01 26 10 Ø	54 50 98 N			22	
28/11	3861-14	78	dk2	16:20	16:30	01 25 85 Ø	54 50 84 N	01 26 20 Ø	54 51 14 N		
28/11	3861-14	79	dk2	16:38	16:48	01 26 32 Ø	54 50 98 N	01 25 69 Ø	54 50 89 N		
28/11	3861-14	80	dk2	16:56	17:06	01 25 78 Ø	54 51 06 N	01 26 22 Ø	54 50 81 N		
28/11	3961-29	81	v veen	18:13		01 21 08 Ø	55 01 04 N			30	
28/11	3961-29	82	dk2	18:21	18:31	01 21 40 Ø	55 00 94 N	01 20 84 Ø	55 01 09 N		
28/11	3961-29	83	dk2	18:38	18:48	01 21 06 Ø	55 01 19 N	01 21 04 Ø	55 00 84 N		
28/11	3961-29	84	dk2	18:56	19:06	01 20 79 Ø	55 00 91 N	01 21 31 Ø	55 01 16 N		
28/11	3961-28	85	v veen	19:31		01 22 08 Ø	55 04 46 N			33	
28/11	3961-28	86	dk2	19:39	19:49	01 23 09 Ø	55 04 37 N	01 22 70 Ø	55 04 62 N		
28/11	3961-28	87	dk2	19:57	20:07	01 22 90 Ø	55 04 69 N	01 22 86 Ø	55 04 30 N		

28/11	3961-28	88	dk2	20:16	20:26	01 22 51 Ø	55 04 40 N	01 23 12 Ø	55 04 58 N		
28/11	2009-03	89	v veen	22:22		01 31 91 Ø	55 12 72 N			34	
28/11	2009-03	90	v veen	22:25		01 31 19 Ø	55 12 70 N			34	
28/11	2009-03	91	v veen	22:29		01 31 83 Ø	55 12 65 N			35	
28/11	2009-03	92	v veen	22:33		01 31 76 Ø	55 12 60 N			35	
28/11	2009-03	93	v veen	22:36		01 31 70 Ø	55 12 55 N			35	
28/11	2009-03	94	dk2	22:02	22:12	01 31 87 Ø	55 12 48 N	01 32 23 Ø	55 12 81 N	35	time is okay, did first the dredge
28/11	2009-03	95	dk2	22:43	22:53	01 31 75 Ø	55 12 59 N	01 32 40 Ø	55 12 73 N	33	
28/11	2009-03	96	dk2	23:01	23:11	01 32 31 Ø	55 12 63 N	01 31 74 Ø	55 12 84 N	35	
28/11	2009-03	97	dk2	23:19	23:29	01 31 90 Ø	55 12 89 N	01 32 17 Ø	55 12 54 N	34	
28/11	2009-03	98	dk2	23:38	23:48	01 12 54 Ø	55 12 55 N	01 32 11 Ø	55 12 92 N	34	
29/11	3963-01	99	v veen	19:50		03 28 73 Ø	55 05 13 N			30	
29/11	3963-01	100	dk2	19:57	20:07	03 28 64 Ø	55 05 10 N	03 38 35 Ø	55 05 39 N		
29/11	3963-01	101	dk2	20:15	20:25	03 28 64 Ø	55 05 41 N	03 28 43 Ø	55 05 02 N		
29/11	3963-01	102	dk2	20:31	20:41	03 28 27 Ø	55 05 13 N	03 28 83 Ø	55 05 31 N		
29/11	3963-04	103	v veen	22:18		03 43 49 Ø	55 15 84 N			31	
29/11	3963-04	104	dk2	22:28	22:38	03 43 88 Ø	55 15 79 N	03 43 28 Ø	55 14 84 N		
29/11	3963-04	105	dk2	22:45	22:55	03 43 36 Ø	55 15 95 N	03 43 80 Ø	55 15 70 N		
29/11	3963-04	106	dk2	23:05	23:15	03 43 53 Ø	55 15 70 N	03 43 63 Ø	55 18 04 N		
30/11	3963-08	107	v veen	00:23		03 50 47 Ø	55 23 18 N			27	
30/11	3963-08	108	dk2	00:30	00:40	03 50 72 Ø	55 23 14 N	03 50 06 Ø	55 23 23 N		
30/11	3963-08	109	dk2	00:48	00:58	03 50 31 Ø	55 23 30 N	03 50 67 Ø	55 22 96 N		
30/11	3963-08	110	dk2	01:06	01:16	03 50 33 Ø	55 23 00 N	03 50 63 Ø	55 23 35 N		
30/11	4065_01	111	v veen	16:06		05 03 85 Ø	55 46 88 N			33	
30/11	4065-01	112	dk2	16:19	16:29	05 04 21 Ø	55 46 80 N	05 03 68 Ø	55 46 98 N		
30/11	4065-01	113	dk2	16:36	16:46	05 03 91 Ø	55 47 07 N	05 03 89 Ø	55 46 70 N		
30/11	4065-01	114	dk2	16:55	17:55	05 03 63 Ø	55 46 76 N	05 04 10 Ø	55 47 01 N		
30/11	4065-02	115	v veen	18:13		05 08 82 Ø	55 43 40 N			34	
30/11	4065-02	116	dk2	18:21	18:31	05 09 30 Ø	55 53 36 N	05 08 65 Ø	55 53 52 N		
30/11	4065-02	117	dk2	18:38	18:48	05 08 90 Ø	55 53 55 N	05 08 91 Ø	55 53 18 N		
30/11	4065-02	118	dk2	18:59	19 09	05 08 62 Ø	55 53 23 N	05 09 00 Ø	55 53 55 N		

30/11	4065-03	119	v veen	20:37		05 18 09 Ø	55 59 85 N			42
30/11	4065-03	120	dk2	20:45	20:55	05 18 32 Ø	55 59 74 N	05 17 95 Ø	56 00 05 N	
30/11	4065-03	121	dk2	21:04	21:14	05 18 20 Ø	56 00 01 N	05 18 32 Ø	55 59 67 N	
30/11	4065-03	122	dk2	21:23	21:33	05 17 80 Ø	55 59 78 N	05 18 32 Ø	56 00 00 N	
30/11	4165-01	123	v veen	22:44		05 15 47 Ø	56 01 68 N			38
30/11	4165-01	124	dk2	22:55	23:05	05 15 83 Ø	56 01 59 N	05 15 26 Ø	56 01 79 N	
30/11	4165-01	125	dk2	23:13	23:23	05 15 44 Ø	56 01 85 N	05 15 55 Ø	56 0146	
30/11	4165-01	126	dk2	23:32	23:42	05 15 31 Ø	56 01 52 N	05 15 31 Ø	56 01 84 N	
01/12	4165-02	127	v veen	00:15		05 17 10 Ø	56 03 63 N			39,5 48 tbn
01/12	4165-02	128	dk2	00:24	00:34	05 17 32 Ø	56 03 60 N	05 16 94 Ø	56 03 90 N	
01/12	4165-02	129	dk2	00:42	00:52	05 17 22 Ø	56 03 90 N	05 17 10 Ø	56 03 55 N	
01/12	4165-02	130	dk2	01:01	01:11	05 16 88 Ø	56 03 70 N	05 17 50 Ø	56 03 80 N	
01/12	2008-02	131	v veen	03:42		05 35 24 Ø	56 17 81 N			36
01/12	2008-02	132	dk2	03:50	04:00	05 35 59 Ø	56 17 82 N	05 35 02 Ø	56 18 03 N	
01/12	2008-02	133	dk2	04:06	04:16	05 35 23 Ø	56 18 09 N	05 35 46 Ø	56 18 00 N	
01/12	2008-02	134	dk2	04:24	04:34	05 34 98 Ø	56 17 78 N	05 34 98 Ø	56 18 00 N	
01/12	4264-05	135	v veen	16:30		04 24 96 Ø	56 39 84 N			49
01/12	4264-05	136	dk2	16:40	16:50	04 25 25 Ø	5639 93 N	04 24 80 Ø	56 39 66 N	
01/12	4264-05	137	dk2	17:01	17:11	04 24 72 Ø	56 39 72 N	04 25 36 Ø	56 39 79 N	
01/12	4264-05	138	dk2	17:20	17:30	04 25 15 Ø	56 39 40 N	04 24 61 Ø	56 40 00 N	
01/12	4264-03	139	v veen	18:43		04 08 94 Ø	56 40 02 N			47
01/12	4264-03	140	dk2	18:54	19:04	04 09 29 Ø	56 40 12 N	04 08 66 Ø	56 39 89 N	
01/12	4264-03	141	dk2	19:11	19:21	04 09 29 Ø	56 40 09 N	04 09 38 Ø	56 40 23 N	
01/12	4264-03	142	dk2	19:33:00	19:43	04 09 05 Ø	56 39 87 N	04 08 96 Ø	56 40 23 N	
01/12	4263-02	143	v veen	22:23		03 42 80 Ø	56 48 84 N			55
01/12	4263-02	144	dk2	22:36	22:46	03 42 94 Ø	56 48 87 N	03 42 35 Ø	56 48 69 N	
01/12	4263-02	145	dk2	23:01	23:11	03 42 35 Ø	56 48 81 N	03 43 04 Ø	56 48 90 N	
01/12	4263-02	146	dk2	23:29	23:39	03 42 88 Ø	56 48 67 N	03 42 31 Ø	56 48 90 N	

02/12	4364-07	147	v veen	16:04		04 33 86 Ø	57 18 00 N			58	
02/12	4364-07	148	dk2	16:18	16:28	04 34 30 Ø	57 18 19 N	04 33 78 Ø	57 19 00 N		
02/12	4364-07	149	dk2	16:40	16:50	04 33 67 Ø	57 18 17 N	04 33 90 Ø	57 18 30 N		
02/12	4364-07	150	dk2	17:01	17:11	04 34 07 Ø	57 17 91 N	04 33 90 Ø	57 18 30 N		
02/12	4364-05	151	v veen	19:16		04 43 66 Ø	57 09 61 N			51	
02/12	4364-05	152	dk2	19:25	19:35	04 43 86 Ø	57 09 46 N	04 43 27 Ø	57 09 22 N		
02/12	4364-05	153	dk2	19:46	19:56	04 43 36 Ø	57 09 49 N	04 43 90 Ø	57 09 36 N		
02/12	4364-05	154	dk2	20:07	20:17	04 43 76 Ø	57 09 24 N	04 43 55 Ø	57 09 64 N		
02/12	4365-08	155	v veen	23:16		05 12 96 Ø	57 07 88 N			51	
02/12	4365-08	156	dk2	23:26	23:36	05 13 19 Ø	57 08 11 N	05 13 10 Ø	57 07 70 N		
02/12	4365-08	157	dk2	23:49	23:59	05 12 90 Ø	57 07 81 N	05 13 57 Ø	57 08 00 N		
03-12	4365-08	158	dk2	00:12	00:22	05 13 39 Ø	57 07 88 N	05 12 59 Ø	57 07 95 N		
03-12	4365-04	159	v veen	02:26		05 28 49 Ø	57 08 49 N			43	
03-12	4365-04	160	dk2	02:36	02:46	05 28 45 Ø	57 08 39 N	05 28 83 Ø	57 08 55 N		
03-12	4365-04	161	dk2	02:56	03:06	05 28 85 Ø	57 08 42 N	05 28 12 Ø	57 08 85 N		
03-12	4365-04	162	dk2	03:20	03:30	05 28 38 Ø	57 08 70 N	05 28 71 Ø	57 08 38 N		
03-12	4365-01	163	v veen	04:40		05 31 36 Ø	57 31 36 N			56	
03-12	4365-01	164	dk2	04:49	04:59	05 31 56 Ø	57 15 50 N	05 31 55 Ø	57 15 12 N		
03-12	4365-01	165	dk2	05:09	05:19	05 31 17 Ø	57 15 20 N	05 31 75 Ø	57 15 41 N		
03-12	4365-01	166	dk2	05:30	05:40	05 31 70 Ø	57 15 30 N	05 30 95 Ø	57 15 38 N		
03-12	4366-06	167	v veen	16:10		06 07 36 Ø	57 06 18 N			47	
03-12	4366-06	168	dk2	16:22	16:32	06 07 22 Ø	57 06 26 N	06 07 68 Ø	57 05 68 N		
03-12	4366-06	169	dk2	16:42	16:52	06 07 45 Ø	57 05 96 N	06 07 55 Ø	57 06 39 N		
03-12	4366-06	170	dk2	17:03	17:13	06 07 66 Ø	57 06 25 N	06 07 17 Ø	57 05 97 N		
03-12	2007-?	171	v veen	20:25		06 41 27 Ø	57 04 45 N			49	
03-12	2007-?	172	dk2	20:36	20:46	06 41 65 Ø	57 04 40 N	06 40 99 Ø	57 04 32 N		
03-12	2007-?	173	dk2	20:56	21:06	06 41 05 Ø	57 04 48 N	06 41 67 Ø	57 04 32 N		
03-12	2007-?	174	dk2	21:17	21:27	06 41 41 Ø	57 04 32 N	06 41 16 Ø	57 04 71 N		
03-12	4367-02	175	v veen	23:27		07 00 21 Ø	57 02 51 N			38	
03-12	4367-02	176	dk2	23:36	23:46	07 00 42 Ø	57 02 72 N	07 00 19 Ø	57 02 40 N		

03-12	4367-02	177	dk2	23:54	00:04	06 59 96 Ø	57 02 52 N	07 00 61 Ø	57 02 54 N		
04/12	4367-02	178	dk2	00:12	00:22	07 00 53 Ø	57 02 43 N	07 00 00 Ø	57 02 69 N		
04/12	4367-06	179	v veen	01:03		07 06 21 Ø	57 03 12 N			26	
04/12	4367-06	180	dk2	01:10	01:20	07 06 60 Ø	57 03 25 N	07 06 02 Ø	57 02 99 N		
04/12	4367-06	181	dk2	01:29	01:40	07 05 88 Ø	57 03 20 N	07 06 68 Ø	57 03 22 N		
04/12	4367-06	182	dk2	01:48	01:58	07 06 44 Ø	57 02 95 N	07 06 05 Ø	57 03 31 N		
04/12	4367-16	183	v veen	03:40		07 26 16 Ø	57 05 43 N			24	
04/12	4367-16	184	dk2	03:47	03:57	07 26 43 Ø	57 05 64 N	07 26 04 Ø	57 05 30 N		
04/12	4367-16	185	dk2	04:05	04:15	07 25 87 Ø	57 05 51 N	07 26 54 Ø	57 05 37 N		
04/12	4367-16	186	dk2	04:22	04:32	07 26 33 Ø	57 05 31 N	07 26 03 Ø	57 05 69 N		
04/12	4367-23	187	v veen	16:01		07 40 21 Ø	57 04 89 N			27	
04/12	4367-23	188	dk2	16:08	16:18	07 40 00 Ø	57 04 92 N	07 40 63 Ø	57 04 77 N		
04/12	4367-23	189	dk2	16:25	16:35	07 40 47 Ø	57 04 73 N	07 40 10v	57 05 10 N		
04/12	4367-23	190	dk2	16:43	16:53	07 40 47 Ø	57 05 07 N	07 40 25 Ø	57 04 70 N		poss. Is okay
04/12	4263-25	191	v veen	17:40		07 41 81 Ø	56 58 92 N			20	
04/12	4263-25	192	dk2	17:45	17:55	07 41 92 Ø	56 95 15 N	07 41 77 Ø	56 58 74 N		
04/12	4263-25	193	dk2	18:20	18:30	07 42 11 Ø	56 58 84 N	07 41 50 Ø	56 59 07 N		
04/12	4263-25	194	dk2	18:36	18:46	07 41 67 Ø	56 59 13 N	07 42 00 Ø	56 58 79 N		
04/12	4267-12	195	v veen	19:47		07 25 85 Ø	56 56 53 N			26	
04/12	4267-12	196	dk2	19:54	20:04	07 25 61 Ø	56 56 69 N	07 26 07 Ø	56 56 44 N		
04/12	4267-12	197	dk2	20:11	20:21	07 25 87 Ø	56 56 39 N	07 25 88 Ø	56 56 76 N		
04/12	4267-12	198	dk2	20:29	20:39	07 26 11 Ø	56 56 68 N	07 25 65 Ø	56 56 39 N		
04/12	4267-27	199	v veen	21:23		07 36 07 Ø	56 54 74 N			21	
04/12	4267-27	200	dk2	21:30	21:40	07 36 50 Ø	56 54 91 N	07 36 04 Ø	56 54 62 N		
04/12	4267-27	201	dk2	21:47	21:57	07 35 89 Ø	56 54 76 N	07 36 72 Ø	56 54 75 N		
04/12	4267-27	202	dk2	22:06	22:16	07 36 52 Ø	56 54 58 N	07 36 01 Ø	56 54 90 N		

Table 2 length measurements off all hauls

station 2		station 3		station 6		station 10	
position	3964-04	position	3964-04	position	3964-02	position	3964-01
	gram		gram		gram		gram
total vægt	710	totalvægt	1480	totalvægt	1080	totalvægt	2620
mål prøve	710	mål prøve	360	mål prøve	510	mål prøve	478
scm	antal	scm	antal	scm	antal	scm	antal
40		40		40		40	
39		39		39		39	
38		38		38		38	
37		37		37		37	
36		36		36		36	
35		35		35		35	
34		34		34		34	
33		33		33		33	
32		32		32		32	
31		31		31		31	
30		30		30		30	1
29		29		29		29	1
28		28		28		28	1
27		27		27	1	27	
26	1	26	1	26	2	26	3
25	14	25	3	25	8	25	8
24	24	24	12	24	11	24	14
23	35	23	12	23	18	23	14
22	21	22	19	22	18	22	18
21	24	21	12	21	18	21	15
20	29	20	16	20	18	20	16
19	28	19	6	19	21	19	14
18	22	18	10	18	17	18	9
17	27	17	8	17	5	17	11
16	31	16	12	16	8	16	18
15	18	15	17	15	6	15	13
14	11	14	12	14	9	14	13
13	5	13	8	13	2	13	6
12	1	12		12	1	12	
11		11	1	11		11	
10		10		10		10	
9		9		9		9	
8		8		8		8	
7		7		7		7	
6		6		6		6	
5		5		5		5	
4		4		4		4	
3		3		3		3	
2		2		2		2	
1		1		1		1	
0		0		0		0	
Total	291	Total	149	Total	163	Total	175

station	14	station	18	station	22	station	26
position	3761-08	position	3760-03	position	3760-04	position	3760-05
	gram				gram		gram
total vægt	165	totalvægt	145	totalvægt	54	totalvægt	47
mål prøve	165	mål prøve	145	mål prøve	54	mål prøve	47
scm	antal	scm		scm	antal	scm	antal
40		40		40		40	
39		39		39		39	
38		38		38		38	
37		37		37		37	
36		36		36		36	
35		35		35	1	35	
34		34		34		34	
33		33		33		33	
32		32		32		32	
31		31	1	31		31	
30		30		30		30	
29		29	1	29		29	
28		28		28		28	
27		27		27		27	
26		26		26	1	26	
25		25		25		25	
24		24		24		24	
23	1	23	1	23		23	
22	1	22		22		22	
21	3	21	1	21		21	3
20	6	20	2	20		20	3
19	15	19	3	19	1	19	3
18	12	18	2	18		18	3
17	20	17	3	17	1	17	4
16	16	16	9	16	3	16	3
15	9	15	21	15	2	15	1
14	5	14	31	14	6	14	4
13	4	13	29	13	11	13	4
12	8	12	21	12	8	12	
11	1	11	2	11		11	
10		10		10		10	
9		9		9		9	
8		8		8		8	
7		7		7		7	
6		6		6		6	
5		5		5		5	
4		4		4		4	
3		3		3		3	
2		2		2		2	
1		1		1		1	
0		0		0		0	
Total	101	Total	127	Total	34	Total	28

station	30	station	34	station	38	station	42
position	3861-19	position	3861-22	position	3861-23	position	3762-02
	gram		gram		gram		gram
total vægt	2812	totalvægt	773	totalvægt	1376	totalvægt	148
mål prøve	239	mål prøve	271	mål prøve	236	mål prøve	148
scm	antal	scm	antal	scm	antal	scm	antal
40		40		40		40	
39		39		39		39	
38		38		38		38	
37		37		37		37	
36		36		36		36	
35		35		35		35	
34		34		34		34	
33		33		33		33	
32		32		32		32	
31		31		31		31	
30		30		30		30	
29		29		29		29	
28		28		28		28	
27		27		27	1	27	
26		26		26		26	
25		25		25		25	
24		24		24		24	
23		23	2	23	1	23	2
22	1	22	2	22	2	22	2
21	2	21	5	21	2	21	7
20	12	20	12	20	5	20	10
19	12	19	19	19	15	19	13
18	12	18	30	18	13	18	12
17	27	17	30	17	14	17	10
16	27	16	17	16	28	16	3
15	32	15	18	15	23	15	4
14	14	14	13	14	18	14	5
13	6	13	4	13	17	13	7
12	1	12	6	12	25	12	
11	1	11		11	7	11	
10		10		10		10	
9		9		9		9	
8		8		8		8	
7		7		7		7	
6		6		6		6	
5		5		5		5	
4		4		4		4	
3		3		3		3	
2		2		2		2	
1		1		1		1	
0		0		0		0	
Total	147	Total	158	Total	171	Total	75

station	46	station	50	station	58	station	68
position	3761-04	position	3762-01	position	2009-01	position	2009-02
	gram		gram		gram		gram
total vægt	3742	totalvægt	648	totalvægt	458	totalvægt	198
mål prøve	350	mål prøve	354	mål prøve	458	mål prøve	198
scm	antal	scm	antal	scm	antal	scm	antal
40		40		40		40	
39		39		39		39	
38		38		38		38	
37		37		37		37	
36		36		36		36	
35		35		35		35	
34		34		34	2	34	
33		33		33	3	33	
32		32		32	4	32	
31	1	31		31	3	31	
30		30		30	6	30	2
29		29		29	4	29	
28	1	28		28	3	28	
27	1	27	1	27	1	27	
26	3	26	1	26	4	26	1
25	1	25	1	25	11	25	
24	8	24	6	24	3	24	1
23	4	23	8	23	2	23	
22	3	22	1	22	1	22	2
21	16	21	7	21		21	8
20	19	20	20	20	3	20	3
19	31	19	17	19	2	19	8
18	21	18	20	18	1	18	11
17	22	17	22	17	5	17	16
16	11	16	17	16	9	16	11
15	7	15	11	15	7	15	18
14	9	14	11	14	13	14	14
13	5	13	5	13	5	13	4
12		12	3	12	6	12	
11		11		11		11	1
10		10		10		10	
9		9		9		9	
8		8		8		8	
7		7		7		7	
6		6		6		6	
5		5		5		5	
4		4		4		4	
3		3		3		3	
2		2		2		2	
1		1		1		1	
0		0		0		0	
Total	163	Total	151	Total	98	Total	100

station	74
position	3861-32
	gram
totalvægt	2059
mål prøve	409
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	1
31	
30	
29	1
28	2
27	2
26	1
25	1
24	2
23	4
22	12
21	15
20	16
19	25
18	10
17	19
16	19
15	25
14	12
13	6
12	1
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	174

station	78
position	3861-14
	gram
totalvægt	1865
mål prøve	396
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	1
26	2
25	2
24	2
23	2
22	11
21	10
20	18
19	32
18	27
17	21
16	17
15	10
14	5
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	160

station	82
position	3961-29
	gram
totalvægt	569
mål prøve	569
scm	antal
40	
39	
38	
37	
36	
35	1
34	1
33	
32	
31	
30	
29	
28	
27	3
26	6
25	9
24	20
23	16
22	13
21	21
20	16
19	9
18	10
17	7
16	9
15	4
14	1
13	2
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	148

station	86
position	3961-28
	gram
totalvægt	5800
mål prøve	425
scm	antal
40	1
39	
38	
37	
36	1
35	
34	
33	
32	
31	
30	1
29	
28	1
27	
26	1
25	1
24	2
23	2
22	9
21	18
20	17
19	30
18	36
17	22
16	18
15	6
14	2
13	1
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	169

station	94
position	2009-03
	gram
totalvægt	1990
mål prøve	510
scm	antal
40	
39	
38	
37	
36	1
35	
34	
33	
32	
31	
30	
29	
28	
27	2
26	1
25	5
24	11
23	20
22	10
21	20
20	16
19	26
18	18
17	10
16	10
15	6
14	1
13	2
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	159

station	100
position	3963-01
	gram
totalvægt	754
mål prøve	522
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	2
25	5
24	22
23	23
22	21
21	17
20	16
19	11
18	13
17	8
16	7
15	7
14	11
13	5
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	168

station	104
position	3963-04
	gram
totalvægt	69
mål prøve	69
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	
24	2
23	2
22	5
21	1
20	
19	
18	3
17	3
16	2
15	1
14	8
13	6
12	1
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	34

station	105
position	3963-04
	gram
totalvægt	48
mål prøve	48
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	1
24	2
23	2
22	1
21	2
20	
19	
18	2
17	1
16	2
15	2
14	2
13	
12	2
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	19

station	106
position	3963-04
	gram
totalvægt	
mål prøve	
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	1
24	4
23	5
22	5
21	3
20	6
19	2
18	6
17	5
16	2
15	3
14	7
13	1
12	1
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	51

station	108
position	3963-08
	gram
totalvægt	904
mål prøve	512
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	1
32	
31	
30	1
29	
28	
27	
26	
25	5
24	13
23	19
22	16
21	23
20	17
19	19
18	8
17	11
16	10
15	6
14	9
13	6
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	164

station	112
position	4065-01
	gram
totalvægt	324
mål prøve	324
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	4
24	5
23	3
22	7
21	12
20	6
19	15
18	27
17	18
16	16
15	21
14	8
13	6
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	148

station	116
position	4065-02
	gram
totalvægt	1035
mål prøve	471
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	2
24	8
23	5
22	14
21	14
20	16
19	21
18	24
17	18
16	19
15	16
14	10
13	1
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	168

station	120
position	4065-03
	gram
totalvægt	2306
mål prøve	354
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	1
25	1
24	2
23	9
22	4
21	19
20	16
19	29
18	22
17	19
16	10
15	18
14	9
13	2
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	161

station	124
position	4165-01
	gram
totalvægt	2772
mål prøve	686
scm	antal
40	1
39	2
38	1
37	1
36	
35	2
34	4
33	1
32	3
31	
30	
29	1
28	1
27	
26	1
25	3
24	6
23	11
22	13
21	11
20	13
19	16
18	12
17	24
16	16
15	18
14	5
13	4
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	170

station	128
position	4165-02
	gram
totalvægt	2250
mål prøve	410
scm	antal
40	
39	
38	
37	
36	1
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	1
25	1
24	7
23	10
22	9
21	10
20	24
19	26
18	27
17	19
16	15
15	10
14	4
13	1
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	165

station	132
position	2008-02
	gram
totalvægt	1684
mål prøve	490
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	1
27	1
26	1
25	3
24	15
23	17
22	21
21	28
20	26
19	16
18	13
17	9
16	7
15	4
14	2
13	2
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	166

station	
position	4264-05
	gram
totalvægt	0
mål prøve	0
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	0

station	
position	4264-05
	gram
totalvægt	0
mål prøve	0
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	0

station	144
position	4263-02
	gram
totalvægt	20816
mål prøve	3058
scm	antal
50	
49	
48	
47	
46	
45	
44	
43	1
42	
41	4
40	5
39	8
38	11
37	17
36	33
35	17
34	20
33	12
32	7
31	4
30	1
29	1
28	4
27	3
26	7
25	1
24	2
23	
22	1
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	
11	
10	
Total	159

station	148
position	4364-07
	gram
totalvægt	135
mål prøve	135
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	1
29	2
28	4
27	2
26	3
25	
24	1
23	
22	2
21	2
20	
19	2
18	2
17	1
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	22

station	149
position	4364-07
	gram
totalvægt	85
mål prøve	85
scm	antal
40	
39	
38	1
37	3
36	1
35	1
34	2
33	1
32	2
31	1
30	
29	4
28	
27	2
26	
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	18

station	
position	4364-07
	gram
totalvægt	134
mål prøve	134
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	2
28	4
27	
26	4
25	
24	2
23	1
22	3
21	2
20	2
19	4
18	
17	
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	24

station	152
position	4364-05
	gram
totalvægt	96
mål prøve	96
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	1
27	4
26	4
25	3
24	2
23	
22	
21	
20	1
19	1
18	1
17	2
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	19

station	153
position	4364-05
	gram
totalvægt	135
mål prøve	135
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	1
28	2
27	2
26	2
25	4
24	2
23	3
22	3
21	1
20	2
19	
18	
17	1
16	1
15	2
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	26

station	156
position	4365-08
	gram
totalvægt	3955
mål prøve	1260
scm	antal
50	
49	
48	
47	
46	
45	
44	
43	1
42	1
41	1
40	
39	1
38	3
37	2
36	10
35	9
34	10
33	3
32	4
31	1
30	1
29	
28	
27	2
26	5
25	7
24	7
23	7
22	4
21	8
20	7
19	16
18	7
17	13
16	13
15	7
14	7
13	2
12	
11	
Total	159

station	160
position	4365-04
	gram
totalvægt	558
mål prøve	558
scm	antal
40	
39	
38	
37	
36	
35	1
34	1
33	
32	2
31	1
30	
29	1
28	
27	
26	3
25	4
24	6
23	17
22	10
21	11
20	11
19	19
18	24
17	24
16	35
15	25
14	14
13	5
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	214

station	164
position	4365-01
	gram
totalvægt	
mål prøve	
scm	antal
52	
51	
50	1
49	3
48	2
47	3
46	1
45	3
44	4
43	1
42	3
41	
40	2
39	3
38	1
37	3
36	
35	1
34	
33	
32	
31	
30	
29	
28	
27	
26	1
25	1
24	2
23	2
22	6
21	3
20	1
19	7
18	7
17	4
16	3
15	4
14	3
13	2
12	2
Total	79

station	168
position	4366-06
	gram
totalvægt	802
mål prøve	802
scm	antal
40	
39	
38	2
37	1
36	3
35	10
34	4
33	2
32	9
31	7
30	3
29	1
28	4
27	
26	
25	
24	1
23	
22	
21	1
20	1
19	4
18	7
17	2
16	4
15	2
14	5
13	6
12	1
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	80

station	172
position	2007-?
	gram
totalvægt	197
mål prøve	107
scm	antal
40	
39	
38	1
37	
36	
35	
34	
33	
32	
31	1
30	
29	
28	1
27	3
26	1
25	2
24	1
23	
22	2
21	
20	2
19	
18	1
17	2
16	3
15	
14	2
13	2
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	24

station	173
position	2007-?
	gram
totalvægt	20
mål prøve	20
scm	antal
40	
39	
38	
37	
36	
35	1
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	
24	
23	
22	
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	1

station	176
position	4367-02
	gram
totalvægt	20
mål prøve	10
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	1
25	
24	
23	2
22	
21	
20	
19	
18	1
17	
16	
15	1
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	5

station	177
position	4367-02
	gram
totalvægt	120
mål prøve	120
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	1
28	2
27	3
26	3
25	5
24	2
23	1
22	
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	18

station	178
position	4367-02
	gram
totalvægt	223
mål prøve	223
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	1
31	1
30	
29	
28	
27	5
26	8
25	7
24	6
23	4
22	
21	2
20	
19	
18	
17	
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	34
Total	

station	180
position	4367-06
	gram
totalvægt	123
mål prøve	123
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	1
28	1
27	
26	4
25	1
24	3
23	2
22	3
21	2
20	
19	3
18	6
17	1
16	
15	1
14	1
13	1
12	1
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	31

station	184
position	4367-16
	gram
totalvægt	132
mål prøve	132
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	1
24	
23	
22	4
21	5
20	6
19	5
18	9
17	13
16	8
15	2
14	1
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	54

station	188
position	4367-34
	gram
totalvægt	53
mål prøve	53
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	1
28	
27	
26	
25	
24	2
23	
22	1
21	2
20	1
19	3
18	3
17	
16	1
15	2
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	16

station	189
position	4367-34
	gram
totalvægt	31
mål prøve	31
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	
24	
23	2
22	
21	1
20	1
19	
18	1
17	3
16	1
15	2
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	11

station	190
position	4367-34
	gram
totalvægt	
mål prøve	
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	
24	
23	2
22	3
21	3
20	3
19	1
18	1
17	2
16	2
15	2
14	2
13	1
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	22

station	192
position	4263-25
	gram
totalvægt	130
mål prøve	130
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	1
27	
26	1
25	2
24	7
23	3
22	3
21	3
20	
19	2
18	1
17	4
16	3
15	3
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	33

station	193
position	4263-25
	gram
totalvægt	47
mål prøve	47
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	2
25	1
24	1
23	1
22	
21	1
20	2
19	
18	
17	1
16	
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	9

station	194
position	4263-25
	gram
totalvægt	70
mål prøve	70
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	1
24	6
23	1
22	
21	2
20	
19	2
18	
17	
16	
15	1
14	1
13	1
12	2
11	2
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	19

station	196
position	4267-12
	gram
totalvægt	401
mål prøve	401
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	3
27	9
26	15
25	18
24	8
23	8
22	3
21	2
20	1
19	
18	1
17	
16	1
15	1
14	
13	
12	
11	2
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	72

station	200
position	4267-27
	gram
totalvægt	23
mål prøve	23
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	1
24	2
23	
22	1
21	1
20	
19	
18	
17	
16	1
15	
14	
13	
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	6

station	201
position	4267-27
	gram
totalvægt	33
mål prøve	33
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	
26	
25	2
24	1
23	2
22	1
21	
20	
19	
18	
17	
16	
15	
14	
13	
12	1
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	7

station	202
position	4267-27
	gram
totalvægt	50
mål prøve	50
scm	antal
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	
29	
28	
27	2
26	
25	2
24	2
23	
22	2
21	1
20	2
19	
18	
17	
16	
15	
14	
13	
12	
11	1
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	
Total	12

Figur 3 Table 3 measurements off weight, sample and total off sand ells on all hauls

position	station	totalvægt gr	vægt/målt gr	antal målt	stikprøv gr	stikprøv antal	stikprøv talt	total antal TBM
3964-03	2	710	710	291				291
3864-03	3	1480	360	149				612
3964-03	4	996				389		389
3964-02	6	1080	510	163				345
3964-02	7	1080					310	310
3964-02	8	4200					280	1321
3964-01	10	2620	478	175	635			959
3964-01	11	1560			700		245	546
3964-01	12	4950			760		293	1908
3761-08	14	165	165	101				101
3761-08	15	245				146		146
3761-08	16	222				121		121
3760-03	18	145	145	127				127
3760-03	19	107	107	87				87
3760-03	20	52	52	59				59
3760-04	22	54	54	34				34
3760-04	23	82	82	68				68
3760-04	24	54	54	49				49
3760-05	26	47	47	28				28
3760-05	27	74	74	26				26
3760-05	28	99	99	64				64
3861-19	30	2812	239	147	771			1730
3861-19	31	3540			940		657	2475
3861-19	32	3600			862		556	2322
3861-22	34	773	271	158				451
3861-22	35	188	188	122				122
3861-22	36	870	870	517				517

position	station	totalvægt gr	vægt/målt gr	antal målt	stikprøv gr	stikprøv antal	stikprøv talt	total antal TBM	
3961-29	82	569	569	148				148	
3961-29	83	51						11	
3961-29	84	200						30	
3961-28	86	5800	425	169	1038			2306	
3961-28	87	3373			1040		362	1174	
3961-28	88	8188			1188		508	3501	
2009-03	94	1990	510	159	1240			620	
2009-03	95	5305			1016		314	1639	
2009-03	96	3705			1486		498	1241	
2009-03	97	3800			1028		347	1282	
2009-03	98	4330			1080		395	1583	
position	station	totalvægt gr	vægt/målt gr	antal målt	stikprøv gr	stikprøv antal	stikprøv talt	total antal TBM	
3963-01	100	754	522	168				244	
3963-01	101	452						169	
3963-01	102	616						237	
3963-04	104	69	69	34				34	
3963-04	105	48	48	19				19	
3963-04	106	124	124	51				51	
3963-08	108	904	512	164				289	
3963-08	109	578						213	
3963-08	110	902						356	
4065-01	112	324	324	148				148	
4065-01	113	590						282	
4065-01	114	566						242	
4065-02	116	1035	471	168				369	
4065-02	117	1492						714	
4065-02	118	1062						517	
4065-03	120	2306	354	161	948			1048	
4065-03	121	3450			965		467	1669	
4065-03	122	3988			1043		516	1973	
position	station	totalvægt gr	vægt/målt gr	antal målt	stikprøv gr	stikprøv antal	stikprøv talt	total antal TBM	

position	station	totalvægt gr	vægt/målt gr	antal målt	stikprøv gr	stikprøv antal	stikprøv talt	total antal TBM
4165-01	124	2772	686	170				687
4165-01	125	1139						604
4165-01	126	1522						653
4165-02	128	2250	410	165	918			906
4165-02	129	3328			1126		430	1271
4165-02	130	2800			1075		439	1143
position	station	totalvægt gr	vægt/målt gr	antal målt	stikprøv gr	stikprøv antal	stikprøv talt	total antal TBM
2008-02	132	1684	490	166				570
2008-02	133	2148			1060		339	687
2008-02	134	1072						340
4264-05	135 til 138	0	0	0	0			0
4264-03	140 til 142	0	0	0	0			0
4263-02	144	20816	3058	159	5366			1082
4263-02	145	28000			5100		294	1614
4263-02	146	17700			5500		300	966
4364-07	148	135	135	22				22
4364-07	149	85	85	18				18
4364-07	150	134	134	24				24
4364-05	152	96	96	19				19
4364-05	153	135	135	26				26
4364-05	154	243						54
4365-08	156	3955	1260	159	2695			499
4365-08	157	2942			1646	300		536
4365-08	158	2362			1482	239		380
4365-04	160	558	558	214				214
4365-04	161	962						296
4365-04	162	736						193

position	station	totalvægt gr	vægt/målt gr	antal målt	stikprøv gr	stikprøv antal	stikprøv talt	total antal TBM
4365-01	164	1422	1422	79				79
4365-01	165	819						71
4365-01	166	1983						154
4366-06	168	802	802	80				80
4366-06	169	1286						113
4366-06	170	731						83
2007-?	172	107	107	24				24
2007-?	173	20	20	1				1
2007-?	174	158						39
4367-02	176	20	20	5				5
4367-02	177	120	120	18				18
4367-02	178	223	223	34				34
4367-06	180	123	123	31				31
4367-06	181	116						32
4367-06	182	109						29
4367-16	184	132	132	54				54
4367-16	185	74						32
4367-16	186	184						64
4367-23	188	53	53	16				16
4367-23	189	31	31	11				11
4367-23	190	52	52	22				22
position	station	totalvægt gr	vægt/målt gr	antal målt	stikprøv gr	stikprøv antal	stikprøv talt	total antal TBM
4263-25	192	130	130	33				33
4263-25	193	47	47	9				9
4263-25	194	70	70	19				19
4267-12	196	401	401	72				72
4267-12	197	477						77
4267-12	198	840						143

position	station	totalvægt gr	vægt/målt gr	antal målt	stikprøv gr	stikprøv antal	stikprøv talt	total antal TBM	
4267-27	200	23	23	6				6	
4267-27	201	33	33	7				7	
4267-27	202	50	50	12				12	