

I. ANNEX

ISA Contract for Exploration – Public Information Template

	Type of resource: Polymetallic Sulphides
	Name of Contractor: Federal Institute for Geosciences and Natural Resources (BGR)
	Contract Start: 06 May 2015
	Contract End: 05 May 2030
Sponsoring State: Germany	Location: Central- and Southeast Indian Ridge, Indian Ocean

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Introduction

The information contained in this ISA Contract for Exploration – Public Information Template is made available to the public in response to the request by the Council of the ISA to make contracts publicly available, subject to restrictions on confidential information, industrial secrets and proprietary data.

The content of the present template is in accordance with the Regulations on Prospecting and Exploration for [Polymetallic Sulphides in the Area] [ISBA/16/A/12 Rev. 1] (the “Regulations”).

1. Contract Information

Annex III of the Regulations.

Type of resource	Polymetallic Sulphides
Name of Contractor	Federal Institute for Geosciences and Natural Resources (BGR)
Contract Start	06 May 2015
Contract End	05 May 2030
Location	Central- and Southwest Indian Ridge, Indian Ocean
Contract Area (km²)	10,000

2. Coordinates and Illustrative Chart of the Exploration Area

Schedule 1 of Annex III of the Regulations.

According to the regulations, 100 “polymetallic sulphide blocks” are defined as squares, each 10 by 10 kilometers, with an area of 100 km². The blocks are arranged in 12 non-contiguous clusters, and the minimum number of blocks per cluster is five. The blocks in each cluster are contiguous. In total, the size of the licensed area is 10,000 km².

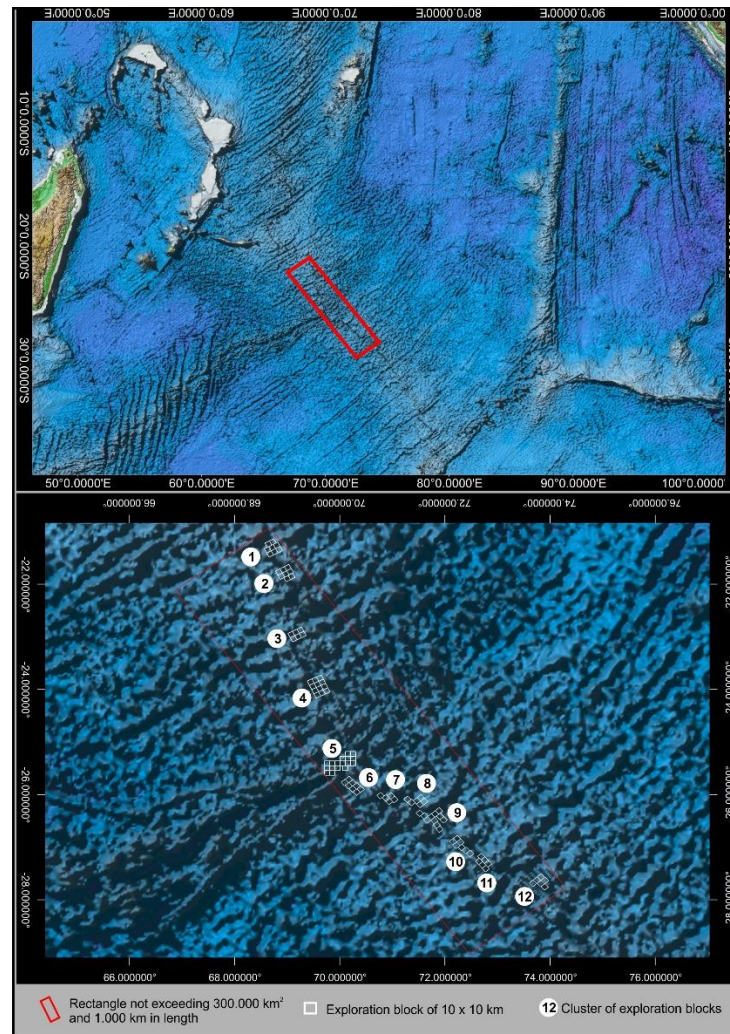
The 12 clusters are confined within a rectangular area (red in the figure below) which is defined by the following coordinates:

Upper left: Longitude 68.674922 and Latitude -20.923030 Decimal Degrees

Upper right: Longitude 66.854634 and Latitude -22.124658 Decimal Degrees

Lower left: Longitude 72.458265 and Latitude -29.048890 Decimal Degrees

Lower right: Longitude 74.290450 and Latitude -27.763981 Decimal Degrees



This confining rectangle has a long side of 949.8 km (max. 1000 km) and a short side of 228.7 km (max. 300 km), its area is approx. 217,200 km² (max. 300,000 km²).

The 100 licensed exploration blocks (white squares in the figure) are located as followed:

Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Longitude (East)			Latitude (South)			Area [km ²]
						Deg	Min	Sec	Deg	Min	Seconds	
1	1	1	1	68.57678895	-21.21955579	68	34	36.44	21	13	10.40	100.0
1	1	1	2	68.66154710	-21.17659568	68	39	41.57	21	10	35.74	
1	1	1	3	68.62260634	-21.29904664	68	37	21.38	21	17	56.57	
1	1	1	4	68.70740564	-21.25606681	68	42	26.66	21	15	21.84	
2	1	2	1	68.66155601	-21.17659928	68	39	41.60	21	10	35.76	100.0
2	1	2	2	68.74626566	-21.13359583	68	44	46.56	21	8	0.94	
2	1	2	3	68.70740564	-21.25606681	68	42	26.66	21	15	21.84	
2	1	2	4	68.79214789	-21.21304113	68	47	31.73	21	12	46.95	
3	1	3	1	68.56468890	-21.32838088	68	33	52.88	21	19	42.17	100.0
3	1	3	2	68.64951327	-21.28542839	68	38	58.25	21	17	7.54	
3	1	3	3	68.69538993	-21.36489966	68	41	43.40	21	21	53.64	
3	1	3	4	68.61053243	-21.40787443	68	36	37.92	21	24	28.35	
4	1	4	1	68.64951327	-21.28542839	68	38	58.25	21	17	7.54	100.0
4	1	4	2	68.73428884	-21.24243231	68	44	3.44	21	14	32.76	
4	1	4	3	68.78019833	-21.32188122	68	46	48.71	21	19	18.77	
4	1	4	4	68.69538993	-21.36489966	68	41	43.40	21	21	53.64	
5	1	5	1	68.73428884	-21.24243231	68	44	3.44	21	14	32.76	100.0
5	1	5	2	68.81901559	-21.19939290	68	49	8.46	21	11	57.81	
5	1	5	3	68.86495759	-21.27881938	68	51	53.85	21	16	43.75	
5	1	5	4	68.78019833	-21.32188122	68	46	48.71	21	19	18.77	
6	1	6	1	68.61053243	-21.40787443	68	36	37.92	21	24	28.35	100.0
6	1	6	2	68.69538993	-21.36489966	68	41	43.40	21	21	53.64	
6	1	6	3	68.74131570	-21.44435822	68	44	28.74	21	26	39.69	
6	1	6	4	68.65642503	-21.48735543	68	39	23.13	21	29	14.48	
7	1	7	1	68.69538993	-21.36489966	68	41	43.40	21	21	53.64	100.0
7	1	7	2	68.78019833	-21.32188122	68	46	48.71	21	19	18.77	
7	1	7	3	68.82615695	-21.40131726	68	49	34.17	21	24	4.74	
7	1	7	4	68.74131570	-21.44435822	68	44	28.74	21	26	39.69	
8	1	8	1	68.78019833	-21.32188122	68	46	48.71	21	19	18.77	100.0
8	1	8	2	68.86495759	-21.27881938	68	51	53.85	21	16	43.75	
8	1	8	3	68.91094876	-21.35823284	68	54	39.42	21	21	29.64	
8	1	8	4	68.82615695	-21.40131726	68	49	34.17	21	24	4.74	
9	2	1	1	68.77584503	-21.75143624	68	46	33.04	21	45	5.17	100.0

Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Longitude (East)			Latitude (South)			Area [km²]
						Deg	Min	Sec	Deg	Min	Seconds	
9	2	1	2	68.86083881	-21.70838920	68	51	39.02	21	42	30.20	
9	2	1	3	68.90697920	-21.78779158	68	54	25.13	21	47	16.05	
9	2	1	4	68.82193491	-21.83087040	68	49	18.97	21	49	51.13	
10	2	2	1	68.86083881	-21.70838920	68	51	39.02	21	42	30.20	100.0
10	2	2	2	68.94582265	-21.66528628	68	56	44.96	21	39	55.03	
10	2	2	3	68.99197505	-21.74466748	68	59	31.11	21	44	40.80	
10	2	2	4	68.90697920	-21.78779158	68	54	25.13	21	47	16.05	
11	2	3	1	68.94582265	-21.66528628	68	56	44.96	21	39	55.03	100.0
11	2	3	2	69.03073276	-21.62214270	69	1	50.64	21	37	19.71	
11	2	3	3	69.07691954	-21.70150852	69	4	36.91	21	42	5.43	
11	2	3	4	68.99197279	-21.74466863	68	59	31.10	21	44	40.81	
12	2	4	1	68.82193491	-21.83087040	68	49	18.97	21	49	51.13	100.0
12	2	4	2	68.90697181	-21.78777886	68	54	25.10	21	47	16.00	
12	2	4	3	68.95315140	-21.86718617	68	57	11.35	21	52	1.87	
12	2	4	4	68.86807547	-21.91029126	68	52	5.07	21	54	37.05	
13	2	5	1	68.90697920	-21.78779158	68	54	25.13	21	47	16.05	100.0
13	2	5	2	68.99197279	-21.74466863	68	59	31.10	21	44	40.81	
13	2	5	3	69.03817982	-21.82404291	69	2	17.45	21	49	26.55	
13	2	5	4	68.95315140	-21.86718617	68	57	11.35	21	52	1.87	
14	2	6	1	68.99197279	-21.74466863	68	59	31.10	21	44	40.81	100.0
14	2	6	2	69.07691954	-21.70150852	69	4	36.91	21	42	5.43	
14	2	6	3	69.12315543	-21.78085270	69	7	23.36	21	46	51.07	
14	2	6	4	69.03817270	-21.82403068	69	2	17.42	21	49	26.51	
15	2	7	1	68.93417887	-21.87681019	68	56	3.04	21	52	36.52	100.0
15	2	7	2	69.01921692	-21.83367374	69	1	9.18	21	50	1.23	
15	2	7	3	69.06546764	-21.91303948	69	3	55.68	21	54	46.94	
15	2	7	4	68.98039642	-21.95619939	68	58	49.43	21	57	22.32	
16	2	8	1	69.01921692	-21.83367374	69	1	9.18	21	50	1.23	100.0
16	2	8	2	69.10420560	-21.79048425	69	6	15.14	21	47	25.74	
16	2	8	3	69.15048749	-21.86982355	69	9	1.75	21	52	11.36	
16	2	8	4	69.06546764	-21.91303948	69	3	55.68	21	54	46.94	
17	3	1	1	69.01324592	-22.93649252	69	0	47.69	22	56	11.37	100.0
17	3	1	2	69.10009852	-22.89547110	69	6	0.35	22	53	43.70	
17	3	1	3	69.14441012	-22.97593592	69	8	39.88	22	58	33.37	
17	3	1	4	69.05752048	-23.01698235	69	3	27.07	23	1	1.14	
18	3	2	1	69.10013368	-22.89544699	69	6	0.48	22	53	43.61	100.0

Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Longitude (East)			Latitude (South)			Area [km²]
						Deg	Min	Sec	Deg	Min	Seconds	
18	3	2	2	69.18698628	-22.85442556	69	11	13.15	22	51	15.93	
18	3	2	3	69.23115959	-22.93495688	69	13	52.17	22	56	5.84	
18	3	2	4	69.14441012	-22.97593592	69	8	39.88	22	58	33.37	
19	3	3	1	69.18698628	-22.85442556	69	11	13.15	22	51	15.93	100.0
19	3	3	2	69.27387644	-22.81338006	69	16	25.96	22	48	48.17	
19	3	3	3	69.31815100	-22.89386988	69	19	5.34	22	53	37.93	
19	3	3	4	69.23115959	-22.93495688	69	13	52.17	22	56	5.84	
20	3	4	1	69.05759609	-23.01693958	69	3	27.35	23	1	0.98	100.0
20	3	4	2	69.14441012	-22.97593592	69	8	39.88	22	58	33.37	
20	3	4	3	69.18876061	-23.05638355	69	11	19.54	23	3	22.98	
20	3	4	4	69.10187066	-23.09742940	69	6	6.73	23	5	50.75	
21	3	5	1	69.14441012	-22.97593592	69	8	39.88	22	58	33.37	100.0
21	3	5	2	69.23115959	-22.93495688	69	13	52.17	22	56	5.84	
21	3	5	3	69.27557020	-23.01537611	69	16	32.05	23	0	55.35	
21	3	5	4	69.18876061	-23.05638355	69	11	19.54	23	3	22.98	
22	3	6	1	69.23115959	-22.93495688	69	13	52.17	22	56	5.84	100.0
22	3	6	2	69.31815100	-22.89386988	69	19	5.34	22	53	37.93	
22	3	6	3	69.36246311	-22.97433564	69	21	44.87	22	58	27.61	
22	3	6	4	69.27557020	-23.01537611	69	16	32.05	23	0	55.35	
23	4	1	1	69.38133314	-23.83939827	69	22	52.80	23	50	21.83	100.0
23	4	1	2	69.47012852	-23.80086247	69	28	12.46	23	48	3.10	
23	4	1	3	69.51206408	-23.88253349	69	30	43.43	23	52	57.12	
23	4	1	4	69.42322626	-23.92109370	69	25	23.61	23	55	15.94	
24	4	2	1	69.47012852	-23.80086247	69	28	12.46	23	48	3.10	100.0
24	4	2	2	69.55887075	-23.76227623	69	33	31.93	23	45	44.19	
24	4	2	3	69.60084843	-23.84392273	69	36	3.05	23	50	38.12	
24	4	2	4	69.51206408	-23.88253349	69	30	43.43	23	52	57.12	
25	4	3	1	69.55887075	-23.76227623	69	33	31.93	23	45	44.19	100.0
25	4	3	2	69.64755976	-23.72363984	69	38	51.22	23	43	25.10	
25	4	3	3	69.68957922	-23.80526171	69	41	22.49	23	48	18.94	
25	4	3	4	69.60084843	-23.84392273	69	36	3.05	23	50	38.12	
26	4	4	1	69.42322626	-23.92109370	69	25	23.61	23	55	15.94	100.0
26	4	4	2	69.51206408	-23.88253349	69	30	43.43	23	52	57.12	
26	4	4	3	69.55405312	-23.96419131	69	33	14.59	23	57	51.09	
26	4	4	4	69.46517278	-24.00277610	69	27	54.62	24	0	9.99	
27	4	5	1	69.51206408	-23.88253349	69	30	43.43	23	52	57.12	100.0

Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Longitude (East)			Latitude (South)			Area [km²]
						Deg	Min	Sec	Deg	Min	Seconds	
27	4	5	2	69.60084843	-23.84392273	69	36	3.05	23	50	38.12	
27	4	5	3	69.64287965	-23.92555587	69	38	34.37	23	55	32.00	
27	4	5	4	69.55405312	-23.96419131	69	33	14.59	23	57	51.09	
28	4	6	1	69.60084843	-23.84392273	69	36	3.05	23	50	38.12	100.0
28	4	6	2	69.68957922	-23.80526171	69	41	22.49	23	48	18.94	
28	4	6	3	69.73165231	-23.88687005	69	43	53.95	23	53	12.73	
28	4	6	4	69.64287965	-23.92555587	69	38	34.37	23	55	32.00	
29	4	7	1	69.46517278	-24.00277610	69	27	54.62	24	0	9.99	100.0
29	4	7	2	69.55405312	-23.96419131	69	33	14.59	23	57	51.09	
29	4	7	3	69.59609592	-24.04583584	69	35	45.95	24	2	45.01	
29	4	7	4	69.50717301	-24.08444533	69	30	25.82	24	5	4.00	
30	4	8	1	69.55405312	-23.96419131	69	33	14.59	23	57	51.09	100.0
30	4	8	2	69.64287965	-23.92555587	69	38	34.37	23	55	32.00	
30	4	8	3	69.68496477	-24.00717551	69	41	5.87	24	0	25.83	
30	4	8	4	69.59609595	-24.04583580	69	35	45.95	24	2	45.01	
31	4	9	1	69.64287965	-23.92555587	69	38	34.37	23	55	32.00	100.0
31	4	9	2	69.73165231	-23.88687005	69	43	53.95	23	53	12.73	
31	4	9	3	69.77377936	-23.96846473	69	46	25.61	23	58	6.47	
31	4	9	4	69.68496477	-24.00717551	69	41	5.87	24	0	25.83	
32	4	10	1	69.50717298	-24.08444537	69	30	25.82	24	5	4.00	100.0
32	4	10	2	69.59609592	-24.04583584	69	35	45.95	24	2	45.01	
32	4	10	3	69.63819292	-24.12746683	69	38	17.49	24	7	38.88	
32	4	10	4	69.54922727	-24.16610128	69	32	57.22	24	9	57.96	
33	4	11	1	69.59609592	-24.04583584	69	35	45.95	24	2	45.01	100.0
33	4	11	2	69.68496477	-24.00717551	69	41	5.87	24	0	25.83	
33	4	11	3	69.72710408	-24.08878153	69	43	37.57	24	5	19.61	
33	4	11	4	69.63819292	-24.12746683	69	38	17.49	24	7	38.88	
34	4	12	1	69.68496477	-24.00717551	69	41	5.87	24	0	25.83	100.0
34	4	12	2	69.77377936	-23.96846473	69	46	25.61	23	58	6.47	
34	4	12	3	69.81596071	-24.05004561	69	48	57.46	24	3	0.16	
34	4	12	4	69.72710409	-24.08878151	69	43	37.57	24	5	19.61	
35	5	1	1	70.10675193	-25.18060411	70	6	24.31	25	10	50.17	100.0
35	5	1	2	70.20568793	-25.18060411	70	12	20.48	25	10	50.17	
35	5	1	3	70.20568793	-25.27090082	70	12	20.48	25	16	15.24	
35	5	1	4	70.10675193	-25.27090082	70	6	24.31	25	16	15.24	
36	5	2	1	70.20568793	-25.18060411	70	12	20.48	25	10	50.17	100.0

Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Longitude (East)			Latitude (South)			Area [km²]
						Deg	Min	Sec	Deg	Min	Seconds	
36	5	2	2	70.30462393	-25.18060411	70	18	16.65	25	10	50.17	
36	5	2	3	70.30462393	-25.27090082	70	18	16.65	25	16	15.24	
36	5	2	4	70.20568793	-25.27090082	70	12	20.48	25	16	15.24	
37	5	3	1	70.00781593	-25.27090082	70	0	28.14	25	16	15.24	100.0
37	5	3	2	70.10675193	-25.27090082	70	6	24.31	25	16	15.24	
37	5	3	3	70.10675193	-25.36119753	70	6	24.31	25	21	40.31	
37	5	3	4	70.00781593	-25.36119753	70	0	28.14	25	21	40.31	
38	5	4	1	70.10675193	-25.27090082	70	6	24.31	25	16	15.24	100.0
38	5	4	2	70.20568793	-25.27090082	70	12	20.48	25	16	15.24	
38	5	4	3	70.20568793	-25.36119753	70	12	20.48	25	21	40.31	
38	5	4	4	70.10675193	-25.36119753	70	6	24.31	25	21	40.31	
39	5	5	1	70.20568793	-25.27090082	70	12	20.48	25	16	15.24	100.0
39	5	5	2	70.30462393	-25.27090082	70	18	16.65	25	16	15.24	
39	5	5	3	70.30462393	-25.36119753	70	18	16.65	25	21	40.31	
39	5	5	4	70.20568793	-25.36119753	70	12	20.48	25	21	40.31	
40	5	6	1	69.71100793	-25.36119753	69	42	39.63	25	21	40.31	100.0
40	5	6	2	69.80994393	-25.36119753	69	48	35.80	25	21	40.31	
40	5	6	3	69.80994393	-25.45149424	69	48	35.80	25	27	5.38	
40	5	6	4	69.71100793	-25.45149424	69	42	39.63	25	27	5.38	
41	5	7	1	69.80994393	-25.36119753	69	48	35.80	25	21	40.31	100.0
41	5	7	2	69.90887993	-25.36119753	69	54	31.97	25	21	40.31	
41	5	7	3	69.90887993	-25.45149424	69	54	31.97	25	27	5.38	
41	5	7	4	69.80994393	-25.45149424	69	48	35.80	25	27	5.38	
42	5	8	1	69.90887993	-25.36119753	69	54	31.97	25	21	40.31	100.0
42	5	8	2	70.00781593	-25.36119753	70	0	28.14	25	21	40.31	
42	5	8	3	70.00781593	-25.45149424	70	0	28.14	25	27	5.38	
42	5	8	4	69.90887993	-25.45149424	69	54	31.97	25	27	5.38	
43	5	9	1	70.00781593	-25.36119753	70	0	28.14	25	21	40.31	100.0
43	5	9	2	70.10675193	-25.36119753	70	6	24.31	25	21	40.31	
43	5	9	3	70.10675193	-25.45149424	70	6	24.31	25	27	5.38	
43	5	9	4	70.00781593	-25.45149424	70	0	28.14	25	27	5.38	
44	5	10	1	70.10675193	-25.36119753	70	6	24.31	25	21	40.31	100.0
44	5	10	2	70.20568793	-25.36119753	70	12	20.48	25	21	40.31	
44	5	10	3	70.20568793	-25.45149424	70	12	20.48	25	27	5.38	
44	5	10	4	70.10675193	-25.45149424	70	6	24.31	25	27	5.38	
45	5	11	1	70.20568793	-25.36119753	70	12	20.48	25	21	40.31	100.0

						Longitude (East)			Latitude (South)			
Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Deg	Min	Sec	Deg	Min	Seconds	Area [km²]
45	5	11	2	70.30462393	-25.36119753	70	18	16.65	25	21	40.31	
45	5	11	3	70.30462393	-25.45149424	70	18	16.65	25	27	5.38	
45	5	11	4	70.20568793	-25.45149424	70	12	20.48	25	27	5.38	
46	5	12	1	69.71100793	-25.45149424	69	42	39.63	25	27	5.38	100.0
46	5	12	2	69.80994393	-25.45149424	69	48	35.80	25	27	5.38	
46	5	12	3	69.80994393	-25.54179095	69	48	35.80	25	32	30.45	
46	5	12	4	69.71100793	-25.54179095	69	42	39.63	25	32	30.45	
47	5	13	1	69.80994393	-25.45149424	69	48	35.80	25	27	5.38	100.0
47	5	13	2	69.90887993	-25.45149424	69	54	31.97	25	27	5.38	
47	5	13	3	69.90887993	-25.54179095	69	54	31.97	25	32	30.45	
47	5	13	4	69.80994393	-25.54179095	69	48	35.80	25	32	30.45	
48	5	14	1	69.90887993	-25.45149424	69	54	31.97	25	27	5.38	100.0
48	5	14	2	70.00781593	-25.45149424	70	0	28.14	25	27	5.38	
48	5	14	3	70.00781593	-25.54179095	70	0	28.14	25	32	30.45	
48	5	14	4	69.90887993	-25.54179095	69	54	31.97	25	32	30.45	
49	5	15	1	70.05728393	-25.45149424	70	3	26.22	25	27	5.38	100.0
49	5	15	2	70.15621993	-25.45149424	70	9	22.39	25	27	5.38	
49	5	15	3	70.15621993	-25.54179095	70	9	22.39	25	32	30.45	
49	5	15	4	70.05728393	-25.54179095	70	3	26.22	25	32	30.45	
50	5	16	1	69.71100793	-25.54179095	69	42	39.63	25	32	30.45	100.0
50	5	16	2	69.80994393	-25.54179095	69	48	35.80	25	32	30.45	
50	5	16	3	69.80994393	-25.63208766	69	48	35.80	25	37	55.52	
50	5	16	4	69.71100793	-25.63208766	69	42	39.63	25	37	55.52	
51	5	17	1	69.80994393	-25.54179095	69	48	35.80	25	32	30.45	100.0
51	5	17	2	69.90887993	-25.54179095	69	54	31.97	25	32	30.45	
51	5	17	3	69.90887993	-25.63208766	69	54	31.97	25	37	55.52	
51	5	17	4	69.80994393	-25.63208766	69	48	35.80	25	37	55.52	
52	6	1	1	70.18169605	-25.64999452	70	10	54.11	25	38	59.98	100.0
52	6	1	2	70.24477007	-25.71996653	70	14	41.17	25	43	11.88	
52	6	1	3	70.16730644	-25.77697431	70	10	2.30	25	46	37.11	
52	6	1	4	70.10423242	-25.70700231	70	6	15.24	25	42	25.21	
53	6	2	1	70.10423242	-25.70700231	70	6	15.24	25	42	25.21	100.0
53	6	2	2	70.16729970	-25.77697927	70	10	2.28	25	46	37.13	
53	6	2	3	70.08983823	-25.83398945	70	5	23.42	25	50	2.36	
53	6	2	4	70.02676879	-25.76397598	70	1	36.37	25	45	50.31	
54	6	3	1	70.25611566	-25.71162197	70	15	22.02	25	42	41.84	100.0

Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Longitude (East)			Latitude (South)			Area [km²]
						Deg	Min	Sec	Deg	Min	Seconds	
54	6	3	2	70.31919631	-25.78160133	70	19	9.11	25	46	53.76	
54	6	3	3	70.24171917	-25.83860656	70	14	30.19	25	50	18.98	
54	6	3	4	70.17867061	-25.76861627	70	10	43.21	25	46	7.02	
55	6	4	1	70.17865213	-25.76862987	70	10	43.15	25	46	7.07	100.0
55	6	4	2	70.24171917	-25.83860656	70	14	30.19	25	50	18.98	
55	6	4	3	70.16425784	-25.89561690	70	9	51.33	25	53	44.22	
55	6	4	4	70.10118840	-25.82560343	70	6	4.28	25	49	32.17	
56	6	5	1	70.33089087	-25.77301123	70	19	51.21	25	46	22.84	100.0
56	6	5	2	70.39397152	-25.84299059	70	23	38.30	25	50	34.77	
56	6	5	3	70.31648173	-25.89998177	70	18	59.33	25	53	59.93	
56	6	5	4	70.25343293	-25.82999121	70	15	12.36	25	49	47.97	
57	6	6	1	70.25343293	-25.82999121	70	15	12.36	25	49	47.97	100.0
57	6	6	2	70.31648173	-25.89998177	70	18	59.33	25	53	59.93	
57	6	6	3	70.23904138	-25.95697641	70	14	20.55	25	57	25.12	
57	6	6	4	70.17599060	-25.88698366	70	10	33.57	25	53	13.14	
58	6	7	1	70.40533011	-25.83465712	70	24	19.19	25	50	4.77	100.0
58	6	7	2	70.46841076	-25.90463648	70	28	6.28	25	54	16.69	
58	6	7	3	70.39090978	-25.96161524	70	23	27.28	25	57	41.81	
58	6	7	4	70.32786808	-25.89163103	70	19	40.33	25	53	29.87	
59	6	8	1	70.32786649	-25.89163080	70	19	40.32	25	53	29.87	100.0
59	6	8	2	70.39090978	-25.96161524	70	23	27.28	25	57	41.81	
59	6	8	3	70.31346099	-26.01860386	70	18	48.46	26	1	6.97	
59	6	8	4	70.25039155	-25.94859040	70	15	1.41	25	56	54.93	
60	7	1	1	70.78254285	-25.95570495	70	46	57.15	25	57	20.54	100.0
60	7	1	2	70.84561715	-26.02567726	70	50	44.22	26	1	32.44	
60	7	1	3	70.76814866	-26.08269209	70	46	5.34	26	4	57.69	
60	7	1	4	70.70507922	-26.01267863	70	42	18.29	26	0	45.64	
61	7	2	1	70.88433246	-25.99716617	70	53	3.60	25	59	49.80	100.0
61	7	2	2	70.94749435	-26.06709616	70	56	50.98	26	4	1.55	
61	7	2	3	70.87004658	-26.12415717	70	52	12.17	26	7	26.97	
61	7	2	4	70.80689557	-26.05419296	70	48	24.82	26	3	15.09	
62	7	3	1	70.98027809	-25.96067660	70	58	49.00	25	57	38.44	100.0
62	7	3	2	71.04347284	-26.03056281	71	2	36.50	26	1	50.03	
62	7	3	3	70.96610518	-26.08766686	70	57	57.98	26	5	15.60	
62	7	3	4	70.90292064	-26.01774616	70	54	10.51	26	1	3.89	
63	7	4	1	70.94749435	-26.06709616	70	56	50.98	26	4	1.55	100.0

Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Longitude (East)			Latitude (South)			Area [km²]
						Deg	Min	Sec	Deg	Min	Seconds	
63	7	4	2	71.01073231	-26.13699357	71	0	38.64	26	8	13.18	
63	7	4	3	70.93327384	-26.19408893	70	55	59.79	26	11	38.72	
63	7	4	4	70.87004658	-26.12415717	70	52	12.17	26	7	26.97	
64	7	5	1	71.04347284	-26.03056281	71	2	36.50	26	1	50.03	100.0
64	7	5	2	71.10674476	-26.10041584	71	6	24.28	26	6	1.50	
64	7	5	3	71.02935966	-26.15755900	71	1	45.69	26	9	27.21	
64	7	5	4	70.96610518	-26.08766686	70	57	57.98	26	5	15.60	
65	8	1	1	71.29631067	-26.02571558	71	17	46.72	26	1	32.58	100.0
65	8	1	2	71.35979782	-26.09540903	71	21	35.27	26	5	43.47	
65	8	1	3	71.28255329	-26.15272080	71	16	57.19	26	9	9.79	
65	8	1	4	71.21907531	-26.08299273	71	13	8.67	26	4	58.77	
66	8	2	1	71.37254324	-26.08595712	71	22	21.16	26	5	9.45	100.0
66	8	2	2	71.43603040	-26.15565059	71	26	9.71	26	9	20.34	
66	8	2	3	71.35878586	-26.21296235	71	21	31.63	26	12	46.66	
66	8	2	4	71.29530788	-26.14323427	71	17	43.11	26	8	35.64	
67	8	3	1	71.47280923	-26.05400645	71	28	22.11	26	3	14.42	100.0
67	8	3	2	71.53633309	-26.12365297	71	32	10.80	26	7	25.15	
67	8	3	3	71.45916210	-26.18101388	71	27	32.98	26	10	51.65	
67	8	3	4	71.39565425	-26.11132739	71	23	44.36	26	6	40.78	
68	8	4	1	71.54989506	-25.99664389	71	32	59.62	25	59	47.92	100.0
68	8	4	2	71.61342741	-26.06625586	71	36	48.34	26	3	58.52	
68	8	4	3	71.53633309	-26.12365297	71	32	10.80	26	7	25.15	
68	8	4	4	71.47280923	-26.05400645	71	28	22.11	26	3	14.42	
69	8	5	1	71.53633309	-26.12365297	71	32	10.80	26	7	25.15	100.0
69	8	5	2	71.59993363	-26.19326527	71	35	59.76	26	11	35.75	
69	8	5	3	71.52275402	-26.25066092	71	31	21.91	26	15	2.38	
69	8	5	4	71.45916210	-26.18101388	71	27	32.98	26	10	51.65	
70	8	6	1	71.61342741	-26.06625586	71	36	48.34	26	3	58.52	100.0
70	8	6	2	71.67703626	-26.13583347	71	40	37.33	26	8	9.00	
70	8	6	3	71.59993363	-26.19326527	71	35	59.76	26	11	35.75	
70	8	6	4	71.53633309	-26.12365297	71	32	10.80	26	7	25.15	
71	9	1	1	71.52750209	-26.28980707	71	31	39.01	26	17	23.31	100.0
71	9	1	2	71.59200281	-26.35879975	71	35	31.21	26	21	31.68	
71	9	1	3	71.51539869	-26.41693573	71	30	55.44	26	25	0.97	
71	9	1	4	71.45089925	-26.34790180	71	27	3.24	26	20	52.45	
72	9	2	1	71.61486548	-26.34144368	71	36	53.52	26	20	29.20	100.0

Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Longitude (East)			Latitude (South)			Area [km²]
						Deg	Min	Sec	Deg	Min	Seconds	
72	9	2	2	71.67944795	-26.41039256	71	40	46.01	26	24	37.41	
72	9	2	3	71.60285405	-26.46856772	71	36	10.27	26	28	6.84	
72	9	2	4	71.53827876	-26.39958411	71	32	17.80	26	23	58.50	
73	9	3	1	71.66541161	-26.42106788	71	39	55.48	26	25	15.84	100.0
73	9	3	2	71.73007484	-26.48999110	71	43	48.27	26	29	23.97	
73	9	3	3	71.65346026	-26.54819532	71	39	12.46	26	32	53.50	
73	9	3	4	71.58880371	-26.47923626	71	35	19.69	26	28	45.25	
74	9	4	1	71.74194681	-26.36282939	71	44	31.01	26	21	46.19	100.0
74	9	4	2	71.80661139	-26.43175160	71	48	23.80	26	25	54.31	
74	9	4	3	71.73007486	-26.48999169	71	43	48.27	26	29	23.97	
74	9	4	4	71.66541161	-26.42106788	71	39	55.48	26	25	15.84	
75	9	5	1	71.80661139	-26.43175160	71	48	23.80	26	25	54.31	100.0
75	9	5	2	71.87135924	-26.50060414	71	52	16.89	26	30	2.17	
75	9	5	3	71.79481365	-26.55887586	71	47	41.33	26	33	31.95	
75	9	5	4	71.73007486	-26.48999169	71	43	48.27	26	29	23.97	
76	9	6	1	71.85307581	-26.51453559	71	51	11.07	26	30	52.33	100.0
76	9	6	2	71.91790078	-26.58336026	71	55	4.44	26	35	0.10	
76	9	6	3	71.84132921	-26.64165779	71	50	28.79	26	38	29.97	
76	9	6	4	71.77651465	-26.57280227	71	46	35.45	26	34	22.09	
77	9	7	1	71.90363563	-26.59422902	71	54	13.09	26	35	39.22	100.0
77	9	7	2	71.96853841	-26.66302376	71	58	6.74	26	39	46.89	
77	9	7	3	71.89195054	-26.72135490	71	53	31.02	26	43	16.88	
77	9	7	4	71.82705368	-26.65252457	71	49	37.39	26	39	9.09	
78	9	8	1	71.81847660	-26.30462476	71	49	6.52	26	18	16.65	100.0
78	9	8	2	71.88314365	-26.37351474	71	52	59.32	26	22	24.65	
78	9	8	3	71.80661005	-26.43175320	71	48	23.80	26	25	54.31	
78	9	8	4	71.74194681	-26.36282939	71	44	31.01	26	21	46.19	
79	9	9	1	71.89501085	-26.24638701	71	53	42.04	26	14	46.99	100.0
79	9	9	2	71.95968048	-26.31527562	71	57	34.85	26	18	54.99	
79	9	9	3	71.88314365	-26.37351474	71	52	59.32	26	22	24.65	
79	9	9	4	71.81847660	-26.30462476	71	49	6.52	26	18	16.65	
80	9	10	1	71.91491116	-26.34935400	71	54	53.68	26	20	57.67	100.0
80	9	10	2	71.97952555	-26.41828465	71	58	46.29	26	25	5.82	
80	9	10	3	71.90304462	-26.47648244	71	54	10.96	26	28	35.34	
80	9	10	4	71.83839141	-26.40756934	71	50	18.21	26	24	27.25	
81	9	11	1	71.97952555	-26.41828465	71	58	46.29	26	25	5.82	100.0

Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Longitude (East)			Latitude (South)			Area [km²]
						Deg	Min	Sec	Deg	Min	Seconds	
81	9	11	2	72.04425046	-26.48713123	72	2	39.30	26	29	13.67	
81	9	11	3	71.96771429	-26.54537105	71	58	3.77	26	32	43.34	
81	9	11	4	71.90304462	-26.47648244	71	54	10.96	26	28	35.34	
82	10	1	1	72.15957460	-26.83221151	72	9	34.47	26	49	55.96	100.0
82	10	1	2	72.22396138	-26.90148015	72	13	26.26	26	54	5.33	
82	10	1	3	72.14668543	-26.95921778	72	8	48.07	26	57	33.18	
82	10	1	4	72.08230776	-26.88991831	72	4	56.31	26	53	23.71	
83	10	2	1	72.22396138	-26.90148015	72	13	26.26	26	54	5.33	100.0
83	10	2	2	72.28832484	-26.97076313	72	17	17.97	26	58	14.75	
83	10	2	3	72.21114349	-27.02848033	72	12	40.12	27	1	42.53	
83	10	2	4	72.14668543	-26.95921778	72	8	48.07	26	57	33.18	
84	10	3	1	72.23685057	-26.77447389	72	14	12.66	26	46	28.11	100.0
84	10	3	2	72.30122697	-26.84377080	72	18	4.42	26	50	37.57	
84	10	3	3	72.22396138	-26.90148015	72	13	26.26	26	54	5.33	
84	10	3	4	72.15957460	-26.83221151	72	9	34.47	26	49	55.96	
85	10	4	1	72.30122697	-26.84377080	72	18	4.42	26	50	37.57	100.0
85	10	4	2	72.36561142	-26.91303418	72	21	56.20	26	54	46.92	
85	10	4	3	72.28832484	-26.97076313	72	17	17.97	26	58	14.75	
85	10	4	4	72.22396014	-26.90147760	72	13	26.26	26	54	5.32	
86	10	5	1	72.32614911	-26.94252247	72	19	34.14	26	56	33.08	100.0
86	10	5	2	72.39065872	-27.01165243	72	23	26.37	27	0	41.95	
86	10	5	3	72.31341616	-27.06949023	72	18	48.30	27	4	10.16	
86	10	5	4	72.24887420	-27.00028260	72	14	55.95	27	0	1.02	
87	10	6	1	72.40767062	-26.99891142	72	24	27.61	26	59	56.08	100.0
87	10	6	2	72.47229758	-27.06803356	72	28	20.27	27	4	4.92	
87	10	6	3	72.39506552	-27.12591424	72	23	42.24	27	7	33.29	
87	10	6	4	72.33044125	-27.05675213	72	19	49.59	27	3	24.31	
88	10	7	1	72.48451292	-27.05887745	72	29	4.25	27	3	31.96	100.0
88	10	7	2	72.54922510	-27.12795942	72	32	57.21	27	7	40.65	
88	10	7	3	72.47199683	-27.18587875	72	28	19.19	27	11	9.16	
88	10	7	4	72.40729039	-27.11676022	72	24	26.25	27	7	0.34	
89	11	1	1	72.65423810	-27.20674712	72	39	15.26	27	12	24.29	100.0
89	11	1	2	72.71920678	-27.27570488	72	43	9.14	27	16	32.54	
89	11	1	3	72.64202106	-27.33372496	72	38	31.28	27	20	1.41	
89	11	1	4	72.57701664	-27.26476084	72	34	37.26	27	15	53.14	
90	11	2	1	72.71920747	-27.27570562	72	43	9.15	27	16	32.54	100.0

Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Longitude (East)			Latitude (South)			Area [km²]
						Deg	Min	Sec	Deg	Min	Seconds	
90	11	2	2	72.78421105	-27.34463715	72	47	3.16	27	20	40.69	
90	11	2	3	72.70698460	-27.40268785	72	42	25.14	27	24	9.68	
90	11	2	4	72.64202106	-27.33372496	72	38	31.28	27	20	1.41	
91	11	3	1	72.78421091	-27.34463725	72	47	3.16	27	20	40.69	100.0
91	11	3	2	72.84927953	-27.41354225	72	50	57.41	27	24	48.75	
91	11	3	3	72.77204830	-27.47163007	72	46	19.37	27	28	17.87	
91	11	3	4	72.70698460	-27.40268785	72	42	25.14	27	24	9.68	
92	11	4	1	72.69922505	-27.11446223	72	41	57.21	27	6	52.06	100.0
92	11	4	2	72.76409328	-27.18342835	72	45	50.74	27	11	0.34	
92	11	4	3	72.68691279	-27.24141210	72	41	12.89	27	14	29.08	
92	11	4	4	72.62209298	-27.17245595	72	37	19.53	27	10	20.84	
93	11	5	1	72.76409328	-27.18342835	72	45	50.74	27	11	0.34	100.0
93	11	5	2	72.82904323	-27.25235520	72	49	44.56	27	15	8.48	
93	11	5	3	72.75193619	-27.31039634	72	45	6.97	27	18	37.43	
93	11	5	4	72.68691279	-27.24141210	72	41	12.89	27	14	29.08	
94	11	6	1	72.82904323	-27.25235520	72	49	44.56	27	15	8.48	100.0
94	11	6	2	72.89409256	-27.32123017	72	53	38.73	27	19	16.43	
94	11	6	3	72.81696397	-27.37932109	72	49	1.07	27	22	45.56	
94	11	6	4	72.75193619	-27.31039634	72	45	6.97	27	18	37.43	
95	12	1	1	73.83250015	-27.50682915	73	49	57.00	27	30	24.58	100.0
95	12	1	2	73.89825720	-27.57514983	73	53	53.73	27	34	30.54	
95	12	1	3	73.82156598	-27.63376911	73	49	17.64	27	38	1.57	
95	12	1	4	73.75581026	-27.56541109	73	45	20.92	27	33	55.48	
96	12	2	1	73.75581026	-27.56541109	73	45	20.92	27	33	55.48	100.0
96	12	2	2	73.82156598	-27.63376911	73	49	17.64	27	38	1.57	
96	12	2	3	73.74479318	-27.69235849	73	44	41.26	27	41	32.49	
96	12	2	4	73.67903628	-27.62395992	73	40	44.53	27	37	26.26	
97	12	3	1	73.67903628	-27.62395992	73	40	44.53	27	37	26.26	100.0
97	12	3	2	73.74479318	-27.69235849	73	44	41.26	27	41	32.49	
97	12	3	3	73.66793373	-27.75091224	73	40	4.56	27	45	3.28	
97	12	3	4	73.60217801	-27.68247563	73	36	7.84	27	40	56.91	
98	12	4	1	73.82943914	-27.62776014	73	49	45.98	27	37	39.94	100.0
98	12	4	2	73.89527910	-27.69607211	73	53	43.00	27	41	45.86	
98	12	4	3	73.81851418	-27.75470286	73	49	6.65	27	45	16.93	
98	12	4	4	73.75267255	-27.68635015	73	45	9.62	27	41	10.86	
99	12	5	1	73.90612172	-27.56913753	73	54	22.04	27	34	8.90	100.0

						Longitude (East)			Latitude (South)			
Block Seq.	Cluster Nr.	Block Nr.	Point Nr.	Long(DEZdeg)	Lat(DEZdeg)	Deg	Min	Sec	Deg	Min	Seconds	Area [km²]
99	12	5	2	73.97196502	-27.63741444	73	58	19.07	27	38	14.69	
99	12	5	3	73.89527910	-27.69607211	73	53	43.00	27	41	45.86	
99	12	5	4	73.82943914	-27.62776014	73	49	45.98	27	37	39.94	
100	12	6	1	73.90374727	-27.68960372	73	54	13.49	27	41	22.57	100.0
100	12	6	2	73.96967427	-27.75787176	73	58	10.83	27	45	28.34	
100	12	6	3	73.89291527	-27.81654136	73	53	34.49	27	48	59.55	
100	12	6	4	73.82698901	-27.74823526	73	49	37.16	27	44	53.65	

3. Plan of work

Summary of Plan of Work for Exploration including the Programme of Activities for the first and/or the current 5-year period (Regulation 18).

Year 1 (starting 05/2015)

- Preparation of bathymetric map of the license area
- Geological data processing
- Census on the marine biosphere, comparison of sites
- Studies on recent marine technological developments

Total cost estimate for year 2015: 1.995.000 EUR

Year 2 (2016)

- Continuation of bathymetric mapping
- Geological data processing, petrogenetic and metallogenic
- Census on the marine biosphere, comparison of sites
- Submission of research cruise proposal I

Total cost estimate for year 2016: 2.055.000 EUR

Year 3 (2017)

- Continuation of bathymetric mapping
- Geological data processing, genetic characterization
- Census on the marine biosphere, molecular data

Total cost estimate for year 2017: 1.765.000 EUR

Year 4 (2018)

- Continuation of bathymetric mapping
- Geological data processing, integration of existing data
- Census on the marine biosphere, ongoing comparison
- Submission of research cruise proposal II

Total cost estimate for year 2018: 2.035.000 EUR

Year 5 (2019)

- Continuation of bathymetric mapping
- Geological data processing, fluids
- Census on the marine biosphere, ongoing comparison

Total cost estimate for year 2019: 1.745.000 EUR

Total cost estimate for the 1st 5-year period: 9.595.000 EUR

4. Programme of Activities and Exploration Expenditure

Section 4.1 of Annex IV of the Regulations and Schedule 2 of Annex III of the Regulations.

I. Agreed 5-year Programme of Activities

5-year Programme of Activities	First	Second	Third	Extension
General Objectives	Objective		Description	
	[List of the main objectives of the 5-year Programme of Activities]		[Description of the objective and related activities/factors/parameters]	
	Preparation of bathymetric maps		Following the cruise, the Contractor will compile bathymetric data for the preparation of reliable and detailed bathymetric maps and water column data of the exploration area; this process should integrate existing data from archives, published information, and newly-acquired, high-resolution swath bathymetry and geophysical data	
	Geological data processing		The Contractor will continue analytical measurements together with petrogenic and metallogenic characterization of rock, sulphide, sediment and fluid samples; this progress integrates existing data from former research and prospection cruises	
	Census of the marine biosphere		The Contractor will concentrate on the characterization of benthic communities. This includes the identification of species diversity, abundance and distribution of all Eukaryotic organisms present in the meiofaunal, macrofaunal and megafaunal size ranges. Ongoing comparison of communities from different sites will be complemented by molecular data for ecological and biogeographical characterization	

5-year Programme of Activities	First	Second	Third	Extension
General Objectives	Objective		Description	
	[List of the main objectives of the 5-year Programme of Activities]		[Description of the objective and related activities/factors/parameters]	
	Studies on recent marine technological developments		As marine technology is undergoing changes due to computerization (remote control, automatization, use of autonomous vehicles etc.), studies should focus on the most recent marine technological developments which are of importance for the mining process	
	Submission of research cruise proposal I		The Contractor will prepare and submit a thematic proposal for a research cruise to the exploration area; this proposal will have to undergo a scientific review within Germany's funding system. Main topics will be: (i) detailed sampling of ridge stratigraphy at oceanic core complexes; (ii) integration of petrological and metallogenic concepts; (iii) 3-D modeling of the deeper oceanic lithosphere; and (iv) investigation of benthic communities (taxonomy, composition of assemblages and biodiversity) and their environment	
	Submission of research cruise proposal II		The Contractor will prepare and submit a thematic proposal for a research cruise to be conducted in the exploration area; this proposal will have to undergo a scientific review within Germany's funding system. Main topics will be: (i) detailed characterization and sampling of inactive vent fields; (ii) interaction of polymetallic sulphides with seawater and sediments with time; (iii) structural	

5-year Programme of Activities	First	Second	Third	Extension
General Objectives	Objective		Description	
	[List of the main objectives of the 5-year Programme of Activities]		[Description of the objective and related activities/factors/parameters]	
			modeling of off-axis ridge geometry; and (iv) investigation of benthic communities (taxonomy, composition of assemblages and biodiversity) and their environment at inactive vent fields	

II. Results achieved during reported year 2015 - 2019

Annual objectives and activities			
Year	No.	Agreed Objectives	Objective: Completed, Modified, Postponed or Replaced
2015	1	Geological and geophysical analyses and interpretation incl. bathymetry, magnetics, CSEM, volcanology.	Completed Expenditure: 843.078 EUR
2015	2	Acquisition of exploration equipment, geology, geophysics, and biology, including acquisition of survey- and lab equipment.	Completed Expenditure: 494.119 EUR
2015	3	BGR cruise INDEX2015 to the license area: Field work and sampling for geology/geophysics (50%) and biology (50%).	Completed Expenditure: 3.874.713 EUR
2015	4	Preparation of exploration cruise	Completed Expenditure: 86.164 EUR
2015	5	Biological investigations of fauna	Completed Expenditure: 459.749 EUR
2016	1	Geological and geophysical analyses and interpretation.	Completed Expenditure: 882.186 EUR
2016	2	Acquisition of exploration equipment, geology, geophysics, and biology including acquisition of survey- and lab equipment.	Completed Expenditure: 366.248 EUR
2016	3	BGR cruises INDEX2016_1 and INDEX2016_2 to the license area:	Completed Expenditure: 5.499.374 EUR

Annual objectives and activities			
Year	No.	Agreed Objectives	Objective: Completed, Modified, Postponed or Replaced
		Geology/geophysics and biology incl. AUV and ROV.	
2016	4	Preparation of exploration cruise	Completed Expenditure: 49.708 EUR
2016	5	Biological investigations of fauna	Completed Expenditure: 1.311.226 EUR
2017	1	Geological and geophysical analyses and interpretation	Completed Expenditure: 1.126.719 EUR
2017	2	Acquisition of exploration equipment, geology, geophysics, and biology, including acquisition of survey- and lab equipment.	Completed Expenditure: 656.833 EUR
2017	3	BGR cruise INDEX2017 to license area	Completed Expenditure: 3.895.034 EUR
2017	4	Preparation of exploration cruise	Completed Expenditure: 52.766 EUR
2017	5	Biological investigations of fauna	Completed Expenditure: 1.024.247 EUR
2017	6	Metallurgical processing development	Additional activity, completed Expenditure: 175.888 EUR
2018	1	Geological and geophysical analyses and interpretation	Completed Expenditure: 2.306.783 EUR
2018	2	Work on evaluation of potential mining area	Additional activity, completed Expenditure: 138.720 EUR
2018	3	Acquisition of exploration equipment, geology, geophysics, and biology, including acquisition of survey- and lab equipment.	Completed Expenditure: 708,681 EUR
2018	4	BGR cruise INDEX2018 incl. ROV	Completed Expenditure: 3.517.672 EUR
2018	5	Biological analyses, dating, video and photo analysis, consumables, scientific interpretation, work on regulations, environmental data preparation, reporting, services.	Completed Expenditure: 2.733.269 EUR
2018	6	Preparation of exploration cruise	Completed Expenditure: 101.007 EUR
2019	1	Geological, geochemical and geophysical analyses and interpretation Bathymetry, mapping, magnetics, fluid chemistry, isotopes.	Completed Expenditure: 2.383.324 EUR

Annual objectives and activities			
Year	No.	Agreed Objectives	Objective: Completed, Modified, Postponed or Replaced
2019	2	Acquisition of exploration equipment, geology, geophysics, and biology	Completed Expenditure: 726.612 EUR
2019	3	BGR cruise INDEX2019, incl. ROV	Completed Expenditure: 2.670.666 EUR
2019	4	Preparation of exploration cruise	Completed Expenditure: 106.804 EUR
2019	5	Biological investigations on fauna	Completed Expenditure: 2.758.536 EUR

5. Training Programme

Schedule 3 of Annex III of the Regulations.

I. Training Programme

Type of training	Home lab training	Onboard training
Institutions	BGR/GEOMAR/DZMB	BGR
Duration	6 weeks	6 weeks
Scope	Post-cruise work on samples and data	Routine work onboard the vessel
Fields	Geochemical, mineralogical, microbiological and geophysical analysis of data and samples, processing of bathymetric data, environmental aspects of deep sea mining.	Pre-cruise preparation, vessel navigation, survey planning and selection of sampling sites, introduction to marine sampling tools and techniques
Qualification required		
Financing	Financed by BGR	Financed by BGR

II. Trainings conducted up to reported year 2020

Start year	End Year	Name of Trainee	Nationality	Gender	Type of Programme	Details	Duration
2015	2017	Javier Ignacio PERONI	Argentina	male	on-board and post-cruise training	on-board 2015, post cruise 2017	6 weeks at-sea training, 6 weeks post-cruise training
2015	2017	Unyime Udoudo UMOH	Nigeria	male	on-board and post-cruise training	on-board 2015, post cruise 2017	6 weeks at-sea training, 6 weeks post-cruise training
2016	2018	Mohamed Aly Elsayed Aly HASSAN	Egypt	male	on-board and post-cruise training	on-board 2016, post cruise 2018	6 weeks at-sea training, 6 weeks post-

Start year	End Year	Name of Trainee	Nationality	Gender	Type of Programme	Details	Duration
							cruise training
2016	2017	Helen WONG PEI SAN	Singapore	female	on-board and post-cruise training	on-board 2016, post cruise 2017	6 weeks at-sea training, 6 weeks post-cruise training
2016	2017	Emmanuel QUAYSON	Ghana	male	on-board and post-cruise training	on-board 2016, post cruise 2017	6 weeks at-sea training, 6 weeks post-cruise training
2016	2017	Yanina BERBEGLIA	Argentina	female	on-board and post-cruise training	on-board 2016, post cruise 2017	6 weeks at-sea training, 6 weeks post-cruise training
2017	2019	Eric Kwesi ARTHUR-MENSAH	Ghana	male	on-board and post-cruise training	on-board 2017, post cruise 2019	6 weeks at-sea training, 6 weeks post-cruise training
2017	2018	Thomas Edward Takai WHIDDON	New Zealand - Cook Islands	male	on-board and post-cruise training	on-board 2017, post cruise 2018	6 weeks at-sea training, 6 weeks post-cruise training
2017	2018	Sumran PRAPHAT	Thailand	male	on-board and post-cruise training	on-board 2017, post cruise 2018	6 weeks at-sea training, 6 weeks post-cruise training

Start year	End Year	Name of Trainee	Nationality	Gender	Type of Programme	Details	Duration
2017	2019	Alyaa Aly Mohamed Abdelsalam ZIDAN	Egypt	female	on-board training	on-board 2017, post cruise postponed due to visa issues	6 weeks at-sea training

III. Completed Trainings per Year

	Onboard and home lab training
Year 1 (2015)	
Year 2 (2016)	
Year 3 (2017)	5
Year 4 (2018)	3
Year 5 (2019)	2

6. Standard clauses

Annex IV of the Regulations.