

Exhibit 4.1.7 Surface Water Hydrochemistry - Key Parameter Concentrations - Averages

No of Samples	Site	EC µS/cm	pH	SO ₄ mg/L	Ca mg/L	Fe Diss mg/L	Se	As	Cd	Cu	Ni	Sb	Zn	Cr	Pb	AsCdCuNi	LOCATION
1	TN001		6.50	600	300	5.00	100.0	100.0	200.00	100.0	500		500	1000.0	200.0	900	
2	MO1146 Class IV			300	300	1(Total)		25.0	5.00	100.0	250		500	250.0	25.0	380	
3	STAS 1342/91	1000	6.50	200	100	0.10	10.0	50.0	5.00	50.0	100		5000	50 (hex)	50.0	250	
9	S017	311	7.43	55	45.96	0.23	2.28	2.86	1.44	103	77.69	0.92	182	5.15	1.57	185	BUCIUM (Alba)
9	S018	262	7.48	23	41.87	0.14	2.68	3.07	0.62	31	22.23	1.05	37	2.50	0.94	57	BUCIUM (Sesi)
9	S019	306	6.57	56	45.17	1.05	1.60	2.99	1.77	77	76.11	2.13	288	11.60	1.49	157	BUCIUM before Izbicioara
9	S020	864	3.98	347	102.05	7.19	4.94	2.54	38.45	1150	575.53	0.95	2336	39.77	1.70	1767	IZBICIOARA
9	S022	182	6.98	8	27.22	0.14	2.63	3.18	1.09	15	26.93	0.97	33	11.61	1.28	46	ABRUZEL (Petreni)
9	S021	2878	3.13	1689	389.64	74.44	34.37	7.25	28.62	2184	29679.44	8.42	3831	193.96	15.87	31899	ABRUZEL (Muntari)
13	S002	1057	4.44	530	138.28	5.36	3.02	8.11	20.59	833	50.12	3.14	857	45.50	1.15	912	ABRUZEL
8	S032	2627	2.66	1225	295.83	103.81	26.05	326.54	44.28	997	10499.71	5.72	2090	645.59	9.34	11868	CORNA (Cirnical)
8	S033	2289	2.79	1057	271.65	60.12	19.03	91.19	76.51	698	6613.48	4.12	1331	278.70	5.75	7479	CORNA (Cirnical)
13	S004	499	7.06	133	72.40	1.31	11.52	11.12	4.00	134	6.59	2.96	156	12.88	2.37	156	CORNA before Abrudel
13	S005	304	7.42	26	50.89	0.12	1.85	5.47	3.76	6	2.19	2.45	33	6.19	2.42	17	CERTINA before Abrudel
7	S034	310	7.67	21	47.10	0.14	1.45	1.11	0.00	2	38.76	1.16	26	10.58	0.93	42	SELISTEI
13	S007	665	6.66	278	83.27	28.21	13.32	18.23	5.08	40	57.72	6.72	874	75.98	0.84	121	SELISTEI before Abrudel
8	S029	268	7.01	49	30.65	0.10	1.70	0.80	0.41	4	21.21	0.76	9	0.77	1.04	27	ROSIA
8	S030	401	7.28	23	27.56	0.06	2.10	0.79	0.38	7	11.94	1.23	8	1.66	0.48	20	ROSIA
13	M R088	3226	2.92	1647	331.24	182.33	19.13	33.89	215.18	1242	529.98	12.34	22432	944.22	12.73	2021	ROSIA
8	S031	1566	3.65	657	196.87	18.27	9.03	27.62	10.32	157	2197.52	1.31	1090	184.58	4.99	2393	ROSIA (Nanului)
13	M R085	4291	2.96	2252	238.88	342.05	117.34	454.73	333.88	3371	737.94	103.06	47215	2359.82	63.06	4898	ROSIA
13	S009	1058	4.35	479	102.46	8.69	26.44	31.26	16.21	407	91.72	9.63	4287	134.28	0.84	546	ROSIA
13	S010	1875	3.48	600	133.17	24.44	24.91	21.14	65.48	494	122.63	10.34	5282	170.81	2.56	703	ROSIA
13	S001	343	6.95	114	45.97	2.74	8.79	9.19	7.76	263	6.21	2.41	802	40.66	1.48	287	ABRUDEL
13	S003	416	6.07	158	53.76	2.52	14.62	6.78	9.36	292	10.72	1.73	469	20.72	2.99	319	ABRUDEL before Corna
13	S006	419	6.98	123	53.63	4.29	8.48	7.76	3.69	129	13.26	3.20	278	49.08	1.39	154	ABRUDEL before Selistei
9	S023	413	7.04	104	57.28	0.70	4.80	4.07	2.47	95	224.43	3.49	144	17.88	3.04	326	ABRUDEL before Gura Rosei tailings
13	S008	445	6.77	159	59.34	3.98	10.76	13.79	4.31	131	11.62	3.97	400	40.93	1.81	161	ABRUDEL before Rosia
13	S011	532	5.50	217	71.64	2.15	14.58	22.80	11.93	189	29.30	5.91	582	44.82	1.45	252	ABRUDEL after Rosia
13	S012	489	6.34	199	60.82	1.43	13.54	17.34	11.53	159	26.08	4.63	734	60.47	1.36	214	ABRUDEL before Aries
13	S015	320	7.54	73	44.45	0.08	6.76	5.73	2.36	71	15.12	1.64	40	6.24	3.47	95	STEFANCA before Aries
9	S024	2120	4.18	1080	298.11	45.26	23.67	28.06	47.45	10815	123.88	2.10	7554	171.12	17.24	11014	SESEI before Aries
9	S025	1566	8.74	657	225.16	0.87	12.19	16.06	11.46	1652	25.50	2.68	5178	18.03	9.24	1705	Sartasul tailings before Aries
13	S013	146	7.48	6	24.62	0.11	0.89	1.16	1.62	13	3.00	0.77	42	3.71	1.68	19	ARIES before Abrudel
13	S014	169	7.26	25	26.95	0.20	5.99	3.67	2.29	19	5.20	2.41	69	7.78	4.17	30	ARIES before Stefanca
13	S016	182	7.47	29	27.27	0.18	5.44	4.25	2.60	20	29.17	1.97	68	6.76	3.70	56	ARIES after Stefanca
8	S026	811	6.95	308	103.01	0.97	7.63	9.26	8.88	831	29.85	1.77	781	18.18	2.18	879	ARIES after Sesi
8	S027	258	7.03	74	38.46	0.54	4.27	2.55	4.81	421	44.58	0.88	181	14.25	2.15	473	ARIES after Sesi
8	S028	721	7.63	96	73.17	0.26	3.52	3.61	1.11	22	46.66	0.94	127	36.71	4.84	74	MURES at Alba Iulia
5	S036	1892	3.20	806	165.55	41.61	25.74	59.56	159.65	676	141.52	4.38	6641	574.58	12.98	1037	
5	S037	223	7.23	27	32.65	0.09	1.33	0.50	0.36	5	0.96	1.42	8	3.39	1.24	7	
5	S038	805	7.43	276	105.84	0.03	4.45	3.63	1.04	24	21.49	3.55	407	33.50	1.62	50	
Key	Units:	All heavy metals as Total in µg/L															
		> TN001															
		> MO 1146 Class IV Surface Water, EC & Se > Standard STAS 1342/91															
	M	Mine Adit Discharge															
	3	ROtreatA11	5.50	250	No Standard	0.30	10.0	50.0	5.00	50.0	50		3000	50.0	50.0		
	4	ROtreatA31	5.50	250	No Standard	No Standard	10.0	100.0	5.00	5000.0	100		5000	50.0	50.0		
	6	UKEQS(76/464/EEC)	6.00		No Standard			50.0	5.00	6.0	100		175	175.0	125.0	161	
		UKDWS	1500	6.50	250	No Standard	0.20	10.0	10.0	5.00	112.0	20	5.00	5000	50.0	10.0	147