Table 7.2 Analysis Results of Water Monitoring Investigation (4)

Sample No.	Sample Type	Temp.	pH	ORP	E.C.	Hg	Cd	As	Pb	Cu	Zn	SO_4	Cl
		(C.)		mV	S/m	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-1	Groundwater	33.4	6.85	-112	5.45	0.0012	0.038	0.006	0.27	0.51	0.21	1164	22172
MW-2	Groundwater	33.1	6.92	-191	5.75	0.0025	0.036	0.007	0.22	0.37	0.06	1455	23344
MW-3	Groundwater	34.6	7.15	-127	5.18	0.0005	0.034	0.005	0.26	0.34	0.06	965	20529
MW-4	Groundwater	33.1	6.44	127	5.94	0.0022	0.042	0.007	0.25	0.31	0.08	1500	24106
MW-5	Groundwater	31.9	7.27	25	0.72	0.0021	<0.001	0.004	0.09	1.30	1.57	418	2163
MW-6	Groundwater	32.3	6.72	-25	0.55	0.0028	<0.001	0.004	0.05	1.22	27.01	258	1632
MW-7	Groundwater	33.0	7.69	57	0.10	0.0021	<0.001	0.005	0.22	0.16	0.69	125	112
MW-8	Groundwater	33.1	6.52	-80	2.09	0.0014	<0.001	0.007	0.20	2.04	54.74	1031	7395
MW-9	Groundwater	32.9	6.82	-110	1.19	0.0018	<0.001	0.006	0.21	1.23	10.13	818	3789
MW-11	Groundwater	33.8	6.90	-190	4.18	0.0021	0.039	0.008	0.42	0.92	11.00	1168	16659
MW-12	Groundwater	33.9	6.75	-98	3.18	0.0015	0.025	0.006	0.43	2.47	45.49	1283	15834
MW-13	Groundwater	32.8	6.30	22	1.55	0.0015	0.002	0.005	0.23	0.51	34.72	853	5631
MW-14	Groundwater	33.2	7.38	68	0.74	0.0024	<0.001	0.009	0.09	3.08	43.11	612	2528
Plantsite-1	Groundwater	31.7	7.60	141	0.15	0.0003	<0.001	0.007	< 0.01	0.15	< 0.01	235	218
Trench-1	Surface water	30.8	7.08	14	5.60	0.0042	0.039	0.011	0.44	0.19	0.04	1396	22999
Trench-2	Groundwater	36.7	6.51	10	5.33	0.0010	0.040	0.007	0.44	0.18	0.03	1335	20929
A-4	Groundwater	31.7	7.54	70	0.19	0.0010	<0.001	0.009	< 0.01	0.09	0.02	243	336
A-5	Groundwater	30.6	7.19	72	0.77	0.0003	<0.001	0.005	< 0.01	0.24	0.02	1650	1602
A-7	Groundwater	32.4	7.27	82	0.39	0.0009	<0.001	0.005	< 0.01	1.59	0.68	288	1023
B-1	Groundwater	31.6	7.21	6	0.52	0.0008	<0.001	0.005	< 0.01	0.13	< 0.01	323	1409
B-1A	Groundwater	30.5	7.59	81	0.34	0.0008	<0.001	0.006	< 0.01	0.04	< 0.01	267	805
B-2	Groundwater	32.2	7.41	89	0.35	0.0009	<0.001	0.006	< 0.01	0.06	0.02	229	901
KM-14	Groundwater	30.5	7.09	138	1.71	0.0010	<0.001	0.009	0.02	0.07	0.02	558	5861
KM-14JD	Groundwater	29.8	7.90	100	0.21	0.0012	<0.001	0.005	< 0.01	< 0.01	< 0.01	386	301
Falaj al Qabail	Surface water	32.3	8.29	28	0.11	0.0040	<0.001	0.004	0.02	< 0.01	< 0.01	130	172
JP-4/3	Groundwater	33.7	7.34	-25	0.88	0.0009	<0.001	0.008	0.04	0.02	< 0.01	1362	1777
WS-1	Groundwater	32.5	8.21	44	0.06	0.0003	<0.001	0.003	0.02	< 0.01	0.02	46	96
WS-2	Groundwater	30.4	7.73	84	0.39	0.0006	<0.001	0.004	0.02	< 0.01	0.02	618	823
WS-3	Groundwater	33.2	7.19	88	0.79	0.0018	<0.001	0.004	0.02	0.03	0.02	372	2306
WS-4	Groundwater	32.3	7.29	123	0.92	0.0025	<0.001	0.004	0.08	0.04	0.02	286	2971
WS-5	Groundwater	31.4	7.83	89	0.26	0.0004	<0.001	0.004	0.02	< 0.01	< 0.01	576	291
WS-6	Groundwater	29.8	7.79	97	0.13	0.0011	<0.001	0.004	< 0.01	< 0.01	< 0.01	121	143
WS-7	Groundwater	31.7	7.45	112	0.44	0.0043	<0.001	0.005	< 0.01	< 0.01	< 0.01	583	984
WS-9	Groundwater	32.7	6.85	144	1.56	0.0014	<0.001	0.009	0.21	0.04	< 0.01	518	5328
WS-13	Groundwater	32.7	8.41	41	0.40	0.0027	<0.001	0.007	0.02	< 0.01	< 0.01	535	751
SP-2	Groundwater	32.5	6.85	138	1.79	0.0001	<0.001	0.008	0.22	0.04	< 0.01	640	6201
A-8	Groundwater	29.9	7.53	71	0.27	0.0014	<0.001	0.004	< 0.01	0.02	0.02	481	381
AEX-48	Groundwater	32.5	7.83	31	0.18	0.0010	<0.001	0.003	< 0.01	0.11	< 0.01	299	180
Wadi al Jizi	Surface water	30.2	8.38	76	0.11	0.0019	<0.001	0.005	0.02	< 0.01	< 0.01	69	125
L-1	Groundwater	30.2	7.65	107	0.15	0.0010	<0.001	0.003	< 0.01	< 0.01	< 0.01	359	133
L-2	Groundwater	31.1	7.74	99	0.13	0.0011	<0.001	0.003	< 0.01	< 0.01	< 0.01	195	104
L-3	Groundwater	31.4	7.57	101	0.09	0.0004	<0.001	0.003	< 0.01	< 0.01	< 0.01	138	59
L-3B	Groundwater	30.4	7.60	101	0.08	0.0025	<0.001	0.004	< 0.01	< 0.01	< 0.01	94	65
Falaj al Amhi	Surface water	30.6	8.03	71	0.06	0.0017	<0.001	0.004	< 0.01	< 0.01	< 0.01	66	76
T/D Piezo DH-2	Groundwater	30.0	6.00	52	7.56	0.0050	0.040	0.007	0.54	1.44	0.44	1411	31682
Minimum		29.8	6.00	-191	0.06	0.0001	<0.001	0.003	< 0.01	< 0.01	< 0.01	46	59
Maximum		36.7	8.41	144	7.56	0.0050	0.042	0.011	0.54	3.08	54.74	1650	31682
Average		32.0	7.33	41	1.52	0.0016	0.034	0.006	0.18	0.61	8.86	610	5709

Red color : Exceeding Omani standard of discharge

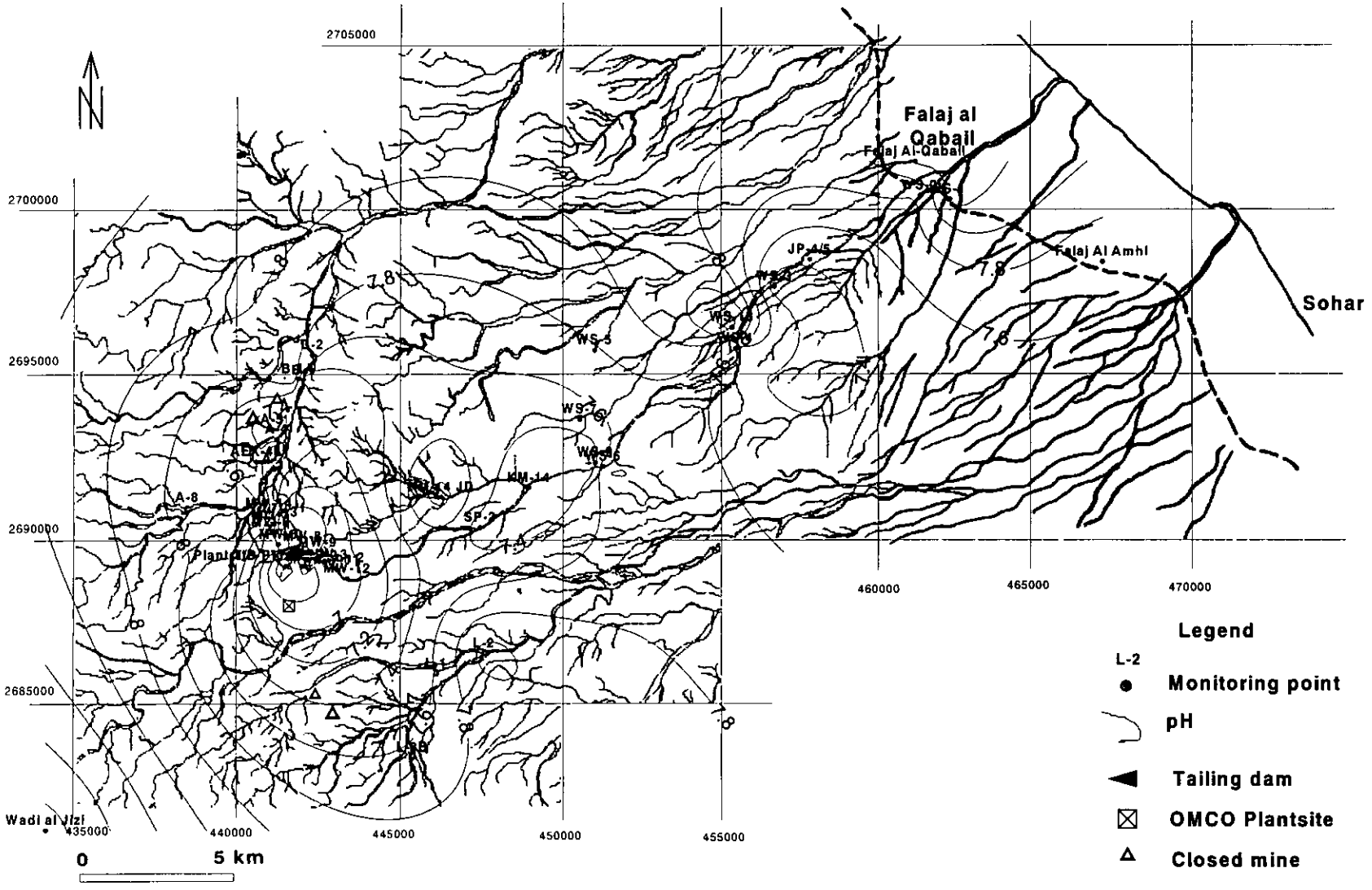

Figure 7.3 Concentration Contour Map of Water Quality Monitoring (1)

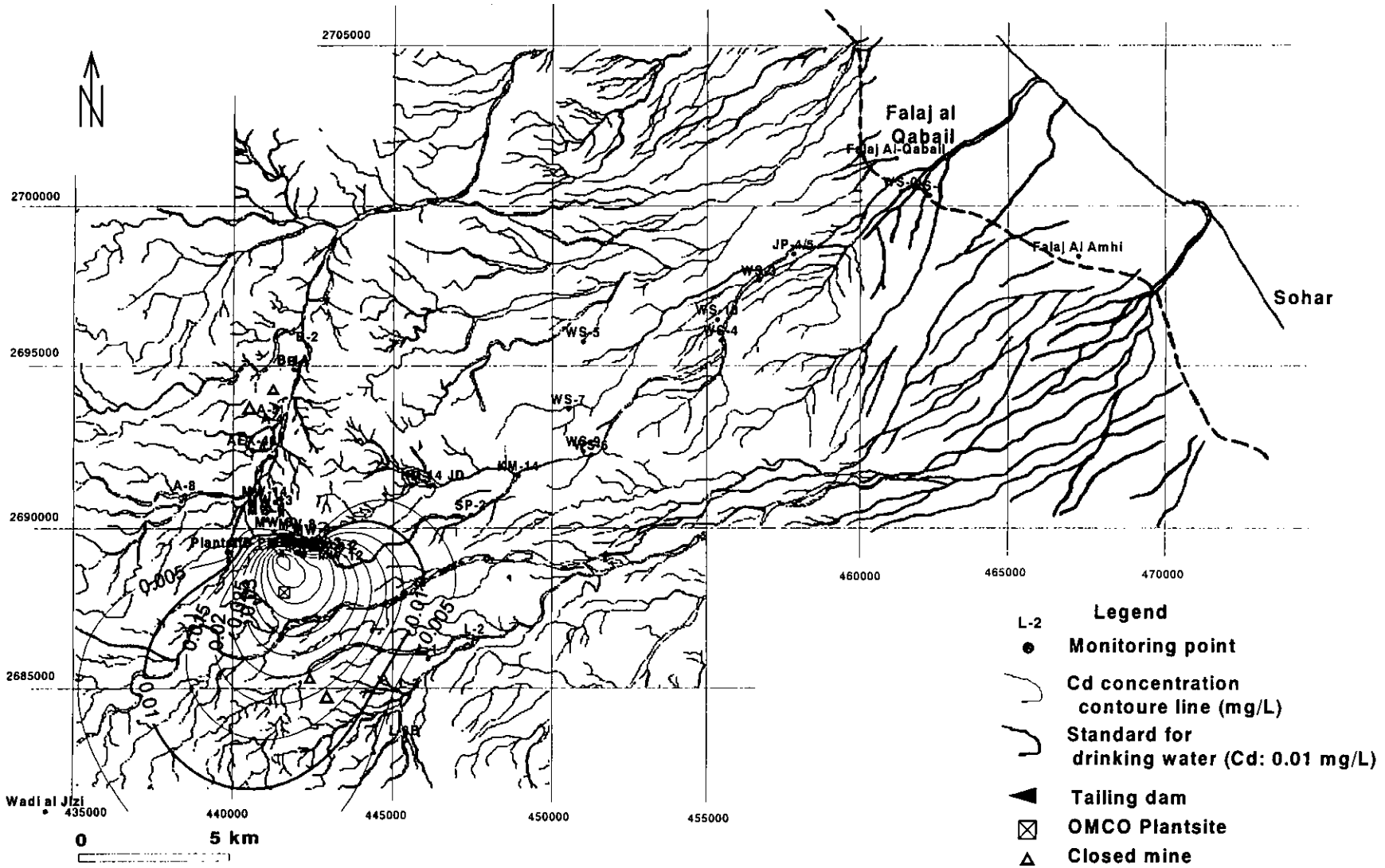

Figure 7.3 Concentration Contour Map of Water Quality Monitoring (2)

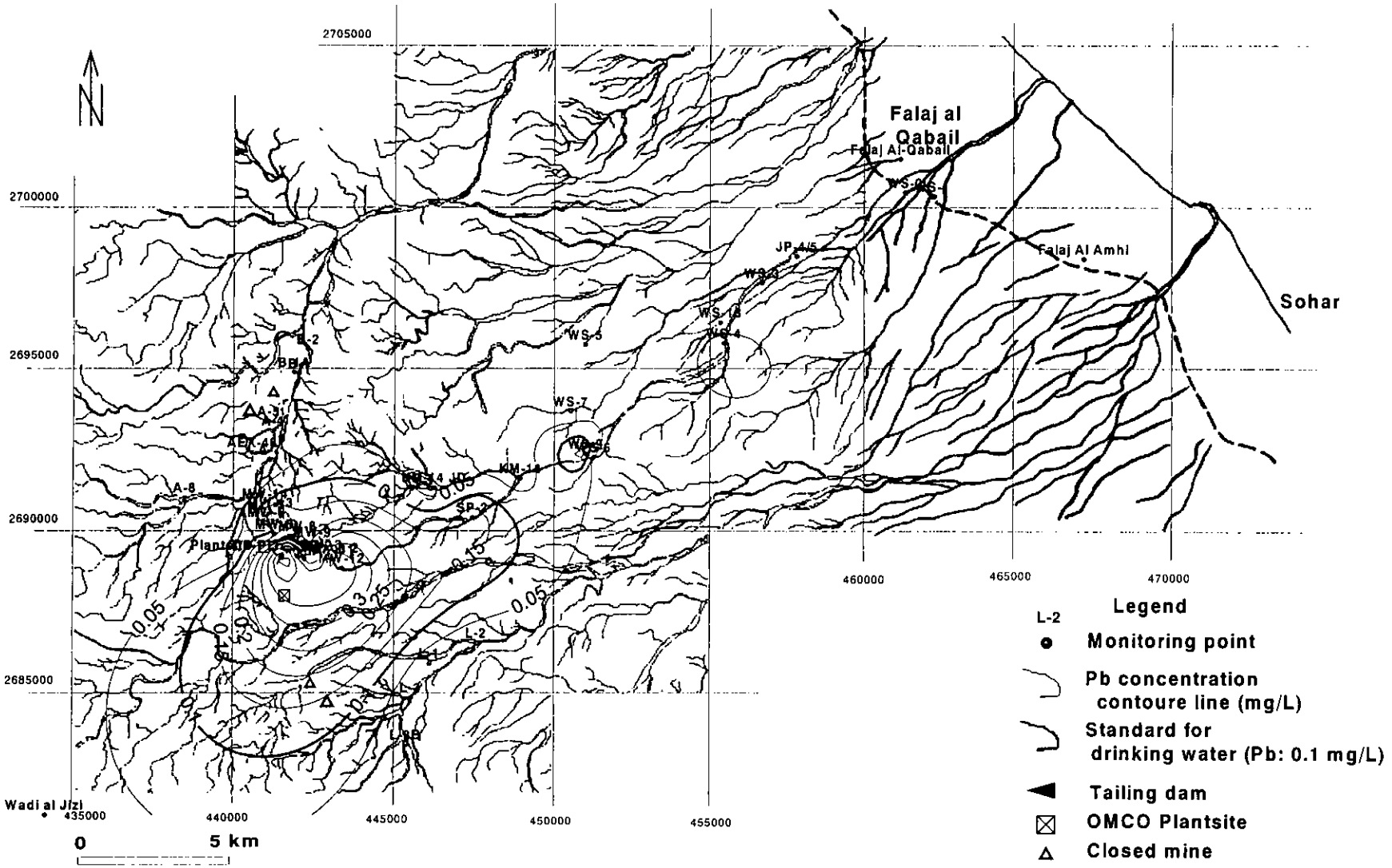

Figure 7.3 Concentration Contour Map of Water Quality Monitoring (3)

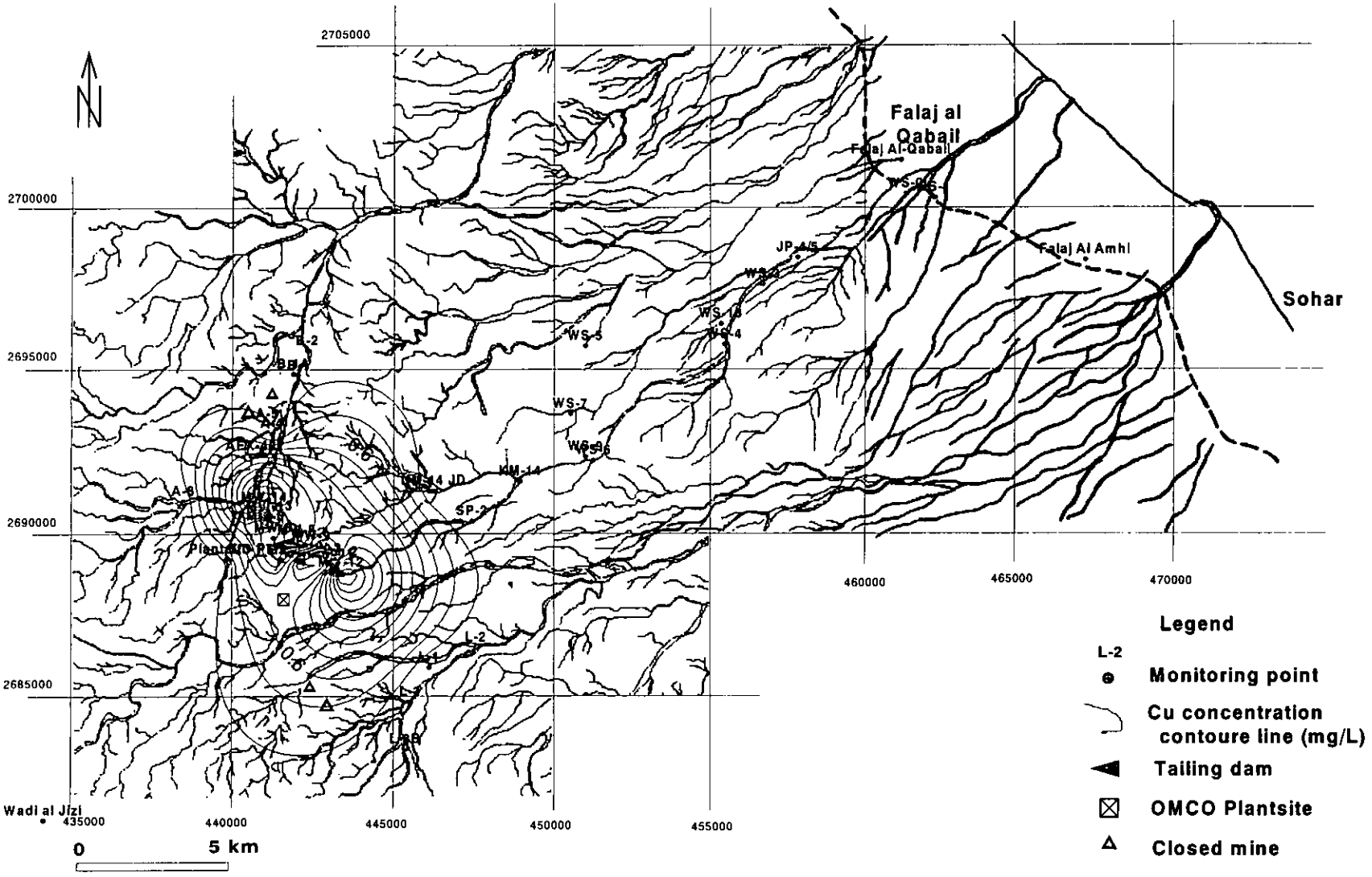

Figure 7.3 Concentration Contour Map of Water Quality Monitoring (4)

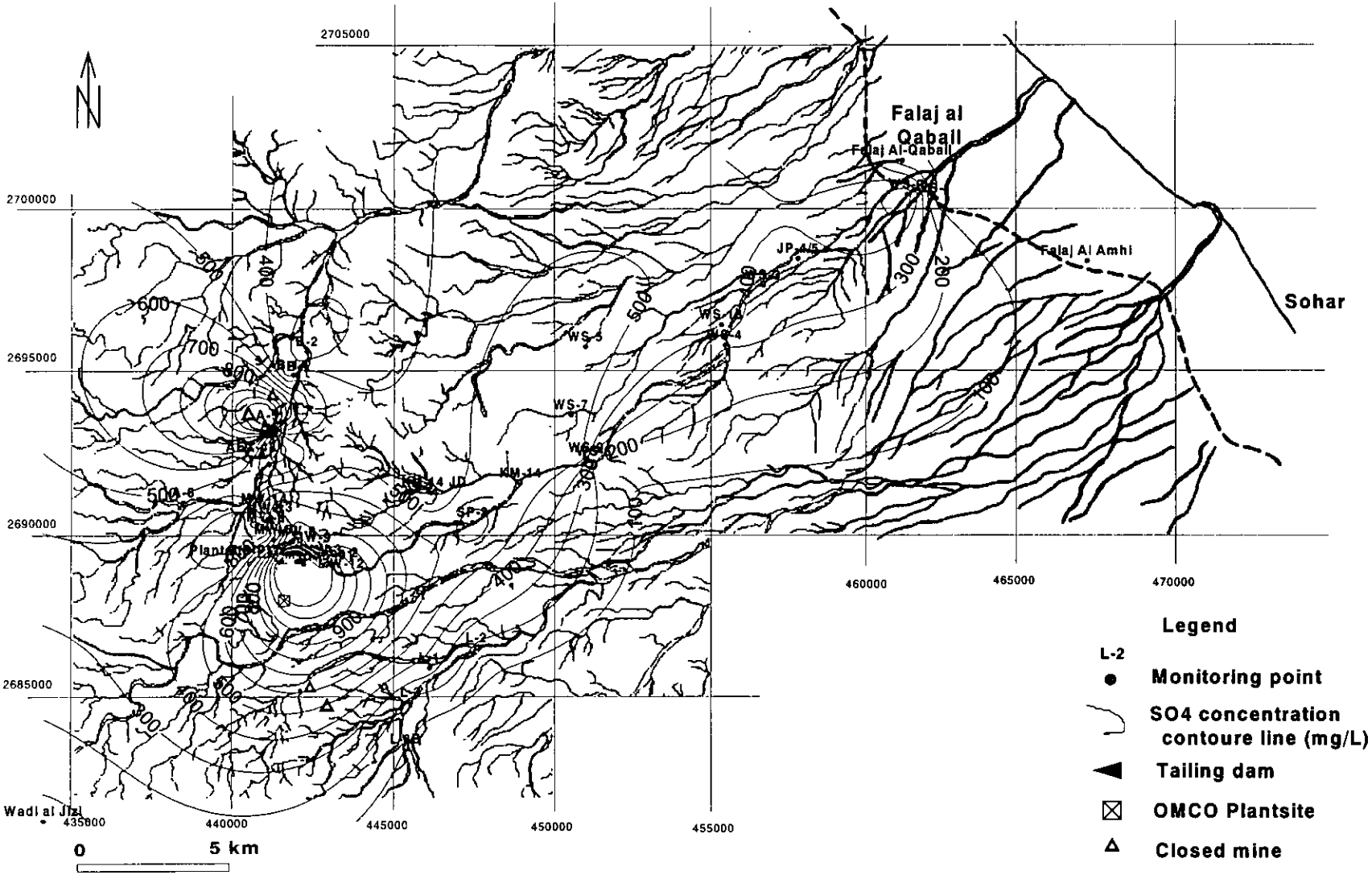

Figure 7.3 Concentration Contour Map of Water Quality Monitoring (5)

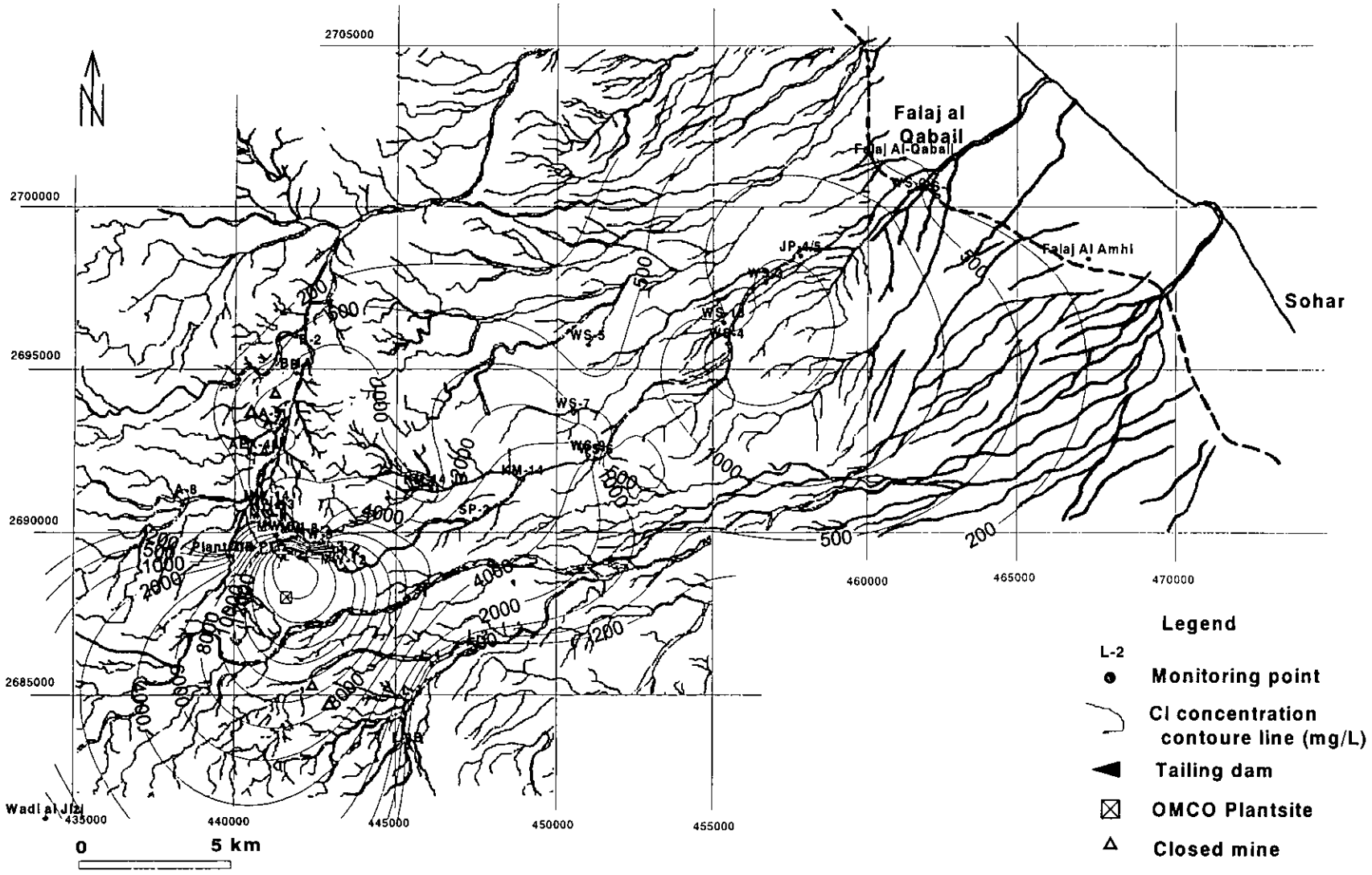

Figure 7.3 Concentration Contour Map of Water Quality Monitoring (6)

- Pb, Cu and Zn presented high concentrations at the tailings impoundment, extending to the northwest, and in the mine water of the Aarja and Lasail West mines.
- SO_4 presented high concentration at the tailings impoundment, extending to the northwest, in the mine water of Aarja and Lasail West, and the area around Magan.
- Cl presented high concentration at the tailings impoundment, extending to the northwest, and downstream along Wadi Suq.

7.3.3 Correlation of Water Quality

The correlation of water quality (average value) among the monitoring points is shown in Table 7.3 (1) to (2) and Figure 7.4. The characteristics of water quality are described, as follows:

- Seasonal differences are hardly recognized.
- The water quality of groundwater at the monitoring points is divided into six groups, namely W-1 to W-6.
- Group W-1, which is found from the tailing dam to MW-12 well along Wadi Suq, is directly affected by the seepage water from the tailing dam.
- Group W-2 is located north of the tailing dam and in the tributaries of Wadi Suq and Wadi Bani Umar al Gharbi. The water of W-2 is strongly affected by the seepage water from the tailing dam.
- Group W-3 is located in the upper and middle parts of Wadi Suq and from northwest of the tailing dam to Bayda Village. The seepage water from the tailing dam slightly affects the water of W-3.
- Group W-4, which is located in the middle part of Wadi Suq, is characterized by relatively high concentrations of Cl. W-4 water quality is moderate, i.e. between Group W-3 and W-5.
- Group W-5, which is found in the middle and lower parts of Wadi Suq, is thought to exhibit the original water quality of Wadi Suq.
- Group W-6 presents the water quality of Wadi al Jizi. Groundwater of the lower part of Wadi Suq has a correlation with Wadi al Jizi.
- The classification of water quality among the monitoring points excellently corresponds with the classification of groundwater of drill holes.

Group G-1 = Group W-1 and W-3
Group G-2 = Group W-5 and W-4
Group G-3 = Group W-6

7.3.4 Extent of Water Contamination

The contaminated seepage including salt and heavy metals from the tailings dam is dispersed to the downstream of Wadi Suq and to Wadi Bani Umar al Gharbi northwest of the tailings dam, as

Table 7.3 Correlation Table of the Water Quality (1)

No.	Sample No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	MW-1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	MW-2	**0.853**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	MW-3	**0.981**	**0.748**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	MW-4	**0.919**	**0.984**	**0.837**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	MW-5	-0.404	-0.497	-0.385	-0.513	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	MW-6	-0.738	-0.792	-0.654	-0.796	**0.649**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	MW-7	-0.359	-0.408	-0.341	-0.394	0.243	0.254	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	MW-8	-0.577	-0.786	-0.430	-0.747	0.269	**0.665**	-0.142	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	MW-9	-0.549	-0.696	-0.484	-0.695	**0.649**	0.399	0.221	**0.586**	1	-	-	-	-	-	-	-	-	-	-	-	-	-
10	MW-11	**0.790**	**0.583**	**0.777**	**0.682**	-0.494	-0.787	0.055	-0.576	-0.383	1	-	-	-	-	-	-	-	-	-	-	-	-
11	MW-12	-0.099	-0.541	0.077	-0.426	0.333	0.418	-0.101	**0.797**	**0.570**	-0.105	1	-	-	-	-	-	-	-	-	-	-	-
12	MW-13	-0.413	-0.594	-0.257	-0.530	-0.054	**0.506**	0.058	**0.825**	0.347	-0.363	**0.684**	1	-	-	-	-	-	-	-	-	-	-
13	MW-14	-0.765	-0.870	-0.688	-0.885	**0.561**	**0.734**	-0.010	**0.807**	**0.664**	-0.684	**0.522**	0.387	1	-	-	-	-	-	-	-	-	-
14	Plantsite-1	-0.162	-0.225	-0.147	-0.229	-0.363	-0.203	-0.218	0.243	0.034	0.104	0.043	-0.032	0.396	1	-	-	-	-	-	-	-	-
15	Trench-1	0.389	**0.659**	0.252	**0.603**	-0.564	-0.745	0.217	-0.879	-0.553	**0.546**	-0.851	-0.621	-0.762	0.029	1	-	-	-	-	-	-	-
16	Trench-2	**0.902**	**0.756**	**0.888**	**0.832**	-0.600	-0.877	-0.152	-0.568	-0.445	**0.927**	-0.122	-0.293	-0.807	-0.010	**0.554**	1	-	-	-	-	-	-
17	A-4	-0.339	-0.180	-0.391	-0.246	-0.377	-0.198	-0.014	0.009	-0.057	-0.029	-0.354	-0.195	0.286	**0.886**	0.315	-0.146	1	-	-	-	-	-
18	A-5	0.232	0.322	0.203	0.317	-0.188	-0.362	-0.701	0.123	0.173	0.025	0.144	0.122	-0.125	-0.063	-0.106	0.241	-0.179	1	-	-	-	-
19	A-7	-0.283	-0.504	-0.235	-0.495	**0.794**	0.469	-0.128	0.459	**0.635**	-0.347	**0.527**	-0.062	**0.758**	0.187	-0.684	-0.474	-0.023	-0.057	1	-	-	-
20	B-1	-0.054	-0.274	0.035	-0.236	-0.042	0.215	-0.581	**0.595**	0.023	-0.175	0.499	0.235	**0.582**	**0.657**	-0.579	-0.193	0.335	0.050	**0.503**	1	-	-
21	B-1A	-0.282	-0.223	-0.294	-0.258	-0.408	-0.121	-0.146	0.169	-0.107	-0.027	-0.163	-0.064	0.368	**0.955**	0.133	-0.139	**0.958**	-0.183	0.051	**0.571**	1	-
22	B-2	-0.348	-0.245	-0.375	-0.297	-0.350	-0.077	-0.033	0.101	-0.112	-0.074	-0.262	-0.128	0.363	**0.909**	0.196	-0.206	**0.976**	-0.290	0.039	0.475	**0.987**	1
23	KM-14	-0.135	0.079	-0.202	-0.007	-0.527	-0.414	-0.255	-0.070	-0.143	0.011	-0.414	-0.228	0.099	**0.824**	0.406	0.030	**0.925**	0.075	-0.152	0.310	**0.878**	**0.871**
24	KM-14JD	-0.545	-0.226	-0.597	-0.288	-0.093	0.433	-0.232	0.242	-0.207	-0.589	-0.261	0.194	0.310	0.088	-0.149	-0.601	0.274	0.095	-0.132	0.178	0.290	0.308
25	Falaj al Qabail	-0.433	-0.151	-0.505	-0.227	0.404	**0.513**	**0.526**	-0.246	-0.112	-0.470	-0.463	-0.146	-0.015	-0.576	0.126	-0.535	-0.214	-0.481	-0.126	-0.555	-0.345	-0.205
26	JP-4/3	-0.002	0.246	-0.081	0.186	-0.495	-0.528	-0.517	-0.017	0.053	0.048	-0.248	-0.050	-0.074	0.432	0.281	0.179	0.483	**0.746**	-0.246	0.066	0.406	0.342
27	WS-1	0.244	-0.221	0.403	-0.083	0.196	0.357	0.008	0.397	-0.016	0.154	**0.734**	0.396	0.166	-0.114	-0.598	0.088	-0.475	-0.294	0.315	0.448	-0.238	-0.301
28	WS-2	0.367	0.251	0.420	0.318	-0.059	-0.079	-0.628	0.279	0.064	0.047	0.478	0.379	-0.144	-0.364	-0.414	0.255	-0.619	**0.800**	-0.014	0.139	-0.504	-0.628
29	WS-3	-0.188	0.016	-0.222	-0.032	0.406	**0.522**	0.233	-0.135	-0.170	-0.477	-0.230	0.023	-0.123	-0.828	-0.091	-0.409	-0.597	-0.219	-0.130	-0.465	-0.650	-0.560
30	WS-4	-0.305	-0.092	-0.352	-0.150	0.373	0.444	**0.624**	-0.281	-0.105	-0.356	-0.388	-0.079	-0.152	-0.699	0.161	-0.383	-0.366	-0.512	-0.214	-0.666	-0.498	-0.360
31	WS-5	0.377	0.192	0.447	0.278	-0.130	-0.128	-0.654	0.355	0.097	0.133	**0.570**	0.417	-0.075	-0.175	-0.445	0.306	-0.494	**0.794**	0.036	0.280	-0.350	-0.494
32	WS-6	-0.295	-0.433	-0.222	-0.392	0.338	**0.729**	0.374	0.230	-0.179	-0.300	0.179	0.203	0.317	-0.162	-0.382	-0.468	-0.170	-0.760	0.200	0.204	-0.046	0.012
33	WS-7	-0.474	-0.042	-0.593	-0.159	0.243	0.330	0.357	-0.307	-0.113	-0.506	-0.651	-0.221	-0.056	-0.452	0.282	-0.517	-0.018	-0.224	-0.239	-0.593	-0.203	-0.070
34	WS-9	-0.156	-0.027	-0.203	-0.081	-0.502	-0.469	0.257	-0.190	0.010	0.237	-0.393	-0.160	-0.059	**0.671**	0.583	0.179	**0.826**	-0.145	-0.310	-0.080	**0.703**	**0.731**
35	WS-13	-0.557	-0.081	-0.695	-0.218	-0.075	0.088	0.228	-0.264	-0.124	-0.414	-0.761	-0.282	0.065	0.120	0.449	-0.463	**0.550**	-0.168	-0.272	-0.336	0.361	0.472
36	SP-2	0.213	0.110	0.235	0.129	-0.597	-0.653	-0.051	-0.016	0.079	0.497	0.035	0.039	-0.142	**0.663**	0.355	**0.523**	**0.556**	0.187	-0.231	0.144	0.539	0.476
37	A-8	-0.223	0.030	-0.268	-0.006	0.262	0.430	-0.138	0.052	-0.068	-0.504	-0.118	0.179	-0.042	-0.707	-0.220	-0.397	-0.542	0.300	-0.140	-0.321	-0.575	-0.550
38	AEX-48	0.054	-0.150	0.138	-0.076	**0.532**	**0.585**	-0.042	0.299	0.084	-0.243	**0.516**	0.330	0.120	-0.685	-0.646	-0.221	-0.852	-0.012	0.295	0.040	-0.721	-0.741
39	Wadi al Jizi	-0.572	-0.357	-0.620	-0.426	0.226	**0.517**	**0.586**	-0.126	-0.175	-0.416	-0.454	-0.145	0.216	-0.041	0.150	-0.595	0.281	-0.780	-0.048	-0.203	0.202	0.341
40	L-1	0.104	-0.044	0.179	0.032	0.333	0.485	-0.174	0.295	-0.023	-0.213	0.468	0.411	0.009	-0.690	-0.587	-0.139	-0.847	0.173	0.105	0.024	-0.713	-0.754
41	L-2	-0.060	-0.242	0.026	-0.173	0.446	**0.685**	0.185	0.243	-0.094	-0.258	0.373	0.318	0.129	-0.590	-0.532	-0.308	-0.680	-0.371	0.179	0.038	-0.547	-0.528
42	L-3	0.263	-0.171	0.415	-0.036	0.219	0.376	-0.099	0.417	-0.015	0.098	**0.749**	0.428	0.144	-0.222	-0.653	0.072	-0.586	-0.150	0.305	0.428	-0.346	-0.420
43	L-3B	-0.424	-0.220	-0.467	-0.275	0.440	**0.609**	**0.534**	-0.161	-0.133	-0.467	-0.344	-0.080	0.052	-0.556	0.011	-0.558	-0.252	-0.582	-0.054	-0.436	-0.335	-0.202
44	Falaj al Amhi	-0.365	-0.318	-0.355	-0.329	0.457	**0.707**	**0.524**	-0.012	-0.152	-0.406	-0.113	0.038	0.150	-0.473	-0.171	-0.535	-0.295	-0.712	0.064	-0.213	-0.293	-0.182
45	T/D Piezo DH-2	**0.529**	**0.599**	0.449	**0.577**	0.139	-0.369	0.320	-0.790	-0.263	0.387	-0.446	-0.589	-0.702	-0.646	**0.549**	0.441	-0.483	-0.187	-0.244	-0.722	-0.628	-0.550

Table 7.3 Correlation Table of the Water Quality (2)

No.	Sample No.	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
1	MW-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	MW-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	MW-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	MW-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	MW-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	MW-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	MW-7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	MW-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	MW-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	MW-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	MW-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	MW-13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	MW-14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Plantsite-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Trench-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Trench-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	A-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	A-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	A-7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	B-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	B-1A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	B-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	KM-14	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	KM-14JD	0.192	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	Falaj al Qabail	-0.356	0.405	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	JP-4/3	**0.676**	0.250	-0.466	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	WS-1	-0.581	-0.296	-0.216	-0.692	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	WS-2	-0.419	0.014	-0.392	0.247	0.274	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	WS-3	-0.623	0.338	**0.869**	-0.513	0.030	0.054	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	WS-4	-0.472	0.182	**0.958**	-0.568	-0.113	-0.348	**0.883**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	WS-5	-0.316	-0.031	-0.563	0.300	0.333	**0.976**	-0.147	-0.526	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	WS-6	-0.430	0.261	**0.527**	-0.838	**0.605**	-0.315	0.499	**0.502**	-0.340	1	-	-	-	-	-	-	-	-	-	-	-	-	-
33	WS-7	-0.087	**0.549**	**0.921**	-0.088	-0.559	-0.353	**0.750**	**0.829**	-0.523	0.218	1	-	-	-	-	-	-	-	-	-	-	-	-
34	WS-9	**0.826**	-0.118	-0.255	0.494	-0.560	-0.605	-0.625	-0.264	-0.500	-0.424	-0.060	1	-	-	-	-	-	-	-	-	-	-	-
35	WS-13	0.484	**0.626**	**0.595**	0.315	-0.806	-0.566	0.254	0.432	-0.638	-0.030	**0.814**	0.442	1	-	-	-	-	-	-	-	-	-	-
36	SP-2	**0.664**	-0.431	-0.746	**0.553**	-0.214	-0.128	-0.880	-0.673	0.027	-0.620	-0.592	**0.804**	-0.127	1	-	-	-	-	-	-	-	-	-
37	A-8	-0.515	**0.609**	**0.608**	-0.051	-0.125	0.450	**0.811**	0.539	0.279	0.180	**0.644**	-0.664	0.260	-0.792	1	-	-	-	-	-	-	-	-
38	AEX-48	-0.909	0.045	0.291	-0.638	**0.680**	**0.523**	**0.631**	0.341	0.431	**0.549**	0.031	-0.961	-0.497	-0.771	**0.596**	1	-	-	-	-	-	-	-
39	Wadi al Jizi	0.036	0.454	**0.818**	-0.450	-0.157	-0.764	**0.503**	**0.722**	-0.832	**0.676**	**0.728**	0.111	**0.680**	-0.457	0.178	-0.035	1	-	-	-	-	-	-
40	L-1	-0.852	0.172	0.228	-0.454	**0.595**	**0.678**	**0.614**	0.269	**0.584**	0.427	0.035	-0.946	-0.461	-0.719	**0.701**	**0.961**	-0.138	1	-	-	-	-	-
41	L-2	-0.826	0.143	0.475	-0.822	**0.715**	0.204	**0.695**	**0.516**	0.120	**0.823**	0.159	-0.825	-0.329	-0.797	**0.507**	**0.916**	0.302	**0.848**	1	-	-	-	-
42	L-3	-0.658	-0.220	-0.197	-0.639	**0.981**	0.432	0.118	-0.103	0.469	**0.560**	-0.516	-0.688	-0.819	-0.310	0.037	**0.780**	-0.229	**0.726**	**0.763**	1	-	-	-
43	L-3B	-0.431	0.391	**0.980**	-0.608	-0.031	-0.391	**0.873**	**0.943**	-0.546	**0.683**	**0.835**	-0.341	0.482	-0.796	**0.572**	0.400	**0.844**	0.315	**0.614**	-0.022	1	-	-
44	Falaj al Amhi	-0.520	0.308	**0.857**	-0.800	0.286	-0.367	**0.795**	**0.839**	-0.482	**0.882**	**0.610**	-0.440	0.243	-0.794	0.443	**0.538**	**0.812**	0.422	**0.786**	0.273	**0.942**	1	-
45	T/D Piezo DH-2	-0.385	-0.539	0.371	-0.356	-0.104	-0.122	0.417	**0.525**	-0.254	-0.083	0.284	-0.145	-0.048	-0.203	0.071	0.116	0.051	0.039	0.102	-0.106	0.318	0.215	1