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## Appendices

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**Appendix 1 List of the collected previous survey data in Western Erdenet area**

# Collected Data in the project area, Mongolia

## 1. Topographic Map

### 1-(1) Topographic maps of 1:100,000 in scale

M-48-100

M-48-101

M-48-110

M-48-111

M-48-112

M-48-113

### 1-(2) Topographic maps of 1:50,000 in scale

M-48-101-B, M-48-101-C, M-48-101-D

M-48-110-C, M-48-110-D

M-48-111-A, M-48-111-B, M-48-111-C, M-48-111-D

M-48-112-A, M-48-112-B, M-48-112-C, M-48-112-D

M-48-113-A, M-48-113-B, M-48-113-C, M-48-113-D,

### 1-(3) Topographic maps of 1:25,000 in scale

M-48-100-D-d

M-48-101-B-a, M-48-101-B-b, M-48-101-B-c, M-48-101-B-d

M-48-101-C-a, M-48-101-C-b, M-48-101-C-c, M-48-101-C-d

M-48-101-D-a, M-48-101-D-b, M-48-101-D-c, M-48-101-D-d

M-48-110-C-a, M-48-110-C-b, M-48-110-C-c, M-48-110-C-d

M-48-110-D-a, M-48-110-D-b, M-48-110-D-c, M-48-110-D-d

M-48-111-C-a, M-48-111-C-b, M-48-111-C-c, M-48-111-C-d

M-48-111-D-a, M-48-111-D-c,

M-48-112-A-a, M-48-112-A-b, M-48-112-A-c, M-48-112-A-d

M-48-112-B-a, M-48-112-B-b, M-48-112-B-c, M-48-112-B-d

M-48-112-C-a, M-48-112-C-b, M-48-112-C-c

M-48-112-D-a, M-48-112-D-b

M-48-113-A-a, M-48-113-A-b, M-48-113-A-c, M-48-113-A-d

M-48-113-C-a, M-48-113-C-b

## **2. Geological maps including the project area.**

Mineral location map of 1:500,00 in scale

Geological map of 1:100,00 in scale including the north and western area of Erdenet mine .

Geological maps of 1:100,00 in scale in and around Erdenet Mine.

2 sheets of geological maps of 1:50,00 in scale in and around Erdenet Mine.

3 sheets of Erdenet Mine area

5 sheets of Location map of the survey of 1:100,000 in scale.

## **3. Geological maps of the seven geological survey areas.**

### **3-(1) Zuukhiin area**

Explanation note

Mineral showing map and survey routs of 1:5,000 in scale

Geological map of 1:25,000 in scale

Geological map of 1:10,000 in scale

Geological map of 1:5,000 in scale

Geophysical maps of IP electric survey (chargeability and resistivity)

Drilling section

### **3-(2) Mogoin gol area**

Explanation note

Mineral showing map and survey routs of 1:5,000 in scale

Geological map of 1:25,000 in scale

Geological map of 1:5,000 in scale

Geophysical maps of IP electric survey (chargeability and resistivity, 1:25,000 in scale)  
and magnetic survey

### **3-(3) Khujiriin area**

Explanation note

Mineral showing map and survey routs of 1:100,000 in scale

Geological map of 1:25,000 in scale

Geological map of 1:5,000 in scale

Geophysical maps of IP electric survey (chargeability and resistivity, 1:25,000 in scale)  
and magnetic survey

### **3-(4) Tsagaan Chuluut area**

Mineral showing map and survey routs of 1:50,000 in scale

Geological map of 1:25,000 in scale

Geophysical maps of IP electric survey (chargeability and resistivity, 1:25,000 in scale) and magnetic survey

### **3-(5) Erdenet Mine area**

Mineral showing map and survey routs of 1:50,000 in scale

Geological map of 1:25,000 in scale

Geophysical maps of IP electric survey (chargeability and resistivity, 1:50,000 in scale) and magnetic survey

### **3-(6) Danbatseren area**

Explanation note

Geological map of 1:25,000 in scale

Geochemical map of 1: 25,000,

Geophysical maps of IP electric survey (chargeability and resistivity, 1:10,000 in scale) and magnetic survey

### **3-(7) Undrakh area**

Explanation note

Mineral showing map and survey routs of 1:50,000 in scale

Geological map of 1:10,000 in scale

Geophysical map of IP electric survey (chargeability and resistivity, 1:10,000 in scale) and magnetic survey

### **3-8 Tsookher mert area**

Explanation note

## **4. Collected data for Erdenet Mine area**

1. 1981-1985 years executed geological survey around the Erdenet area. List of included coordinate of the survey's some area, drilling point, trench and topo points. In the CD number from 01 to 020.
2. Hydro geological map of the Erdenet area, scale 1:100000. In the CD number from 1-1 to

- 1-4.
3. Geochemical map of the Khujiriin gol area, scale 1:25000. In the CD number from 2-1 to 2-4.
4. Geo chemical map of the Mogoin gol area, in the CD number from 3-1 to 3-6.
5. Geological section of the Khujiriin gol area, scale 1:2000. In the CD from 4-1 to 4-4.
6. Drilling point 337, appendix number 40, and list 3. In the CD from 5-1 to 5-6.
7. Drilling point 337, appendix number 40, and list 2. In the CD from 6-1 to 6-4.
8. Drilling point 337, appendix number 40, and list 1. In the CD from 7-1 to 7-4.
9. Drilling point 336, appendix number 39, and list 3. In the CD from 8-1 to 8-6.
10. Drilling point 336, appendix number 39, and list 2. In the CD from 9-1 to 9-5.
11. Drilling point 336, appendix number 39, and list 1. In the CD from 10-1 to 10-4.
12. Drilling point 335, appendix number 38, and list 3. In the CD from 11-1 to 11-6.
13. Drilling point 335, appendix number 38, and list 2. In the CD from 12-1 to 12-5.
14. Drilling point 335, appendix number 38, and list 1. In the CD from 13-1 to 13-4.
15. Drilling point 334, appendix number 37, and list 3. In the CD from 14-1 to 14-4.
16. Drilling point 334, appendix number 37, and list 2. In the CD from 15-1 to 15-4.
17. Drilling point 334, appendix number 37, and list 1. In the CD from 16-1 to 16-4.
18. Drilling point 309, appendix number 55, and list 3. In the CD from 17-1 to 17-3.
19. Drilling point 309, appendix number 55, and list 2. In the CD from 18-1 to 18-4.
20. Drilling point 309, appendix number 55, and list 1. In the CD from 19-1 to 19-4.
21. Drilling point 308, appendix number 54, and list 4. In the CD from 20-1 to 20-6.
22. Drilling point 308, appendix number 54, and list 3. In the CD from 21-1 to 21-4.
23. Drilling point 308, appendix number 54, and list 2. In the CD from 22-1 to 22-4.
24. Drilling point 308, appendix number 54, and list 1. In the CD from 23-1 to 23-4.
25. Drilling point 307, appendix number 53, and list 3. In the CD from 24-1 to 24-4.
26. Drilling point 307, appendix number 53, and list 2. In the CD from 25-1 to 25-4.
27. Drilling point 307, appendix number 53, and list 1. In the CD from 26-1 to 26-4.
28. Location's map of the Khujiriin gol area, scale 1:25000. In the CD from 27-1 to 27-4.
29. Location's map of the Khujiriin gol area, scale 1:10000. In the CD from 28-1 to 28-4.
30. Drilling point 331, appendix number 35, and list 1. In the CD from 29-1 to 29-4.
31. Drilling point 331, appendix number 35, and list 2. In the CD from 30-1 to 30-4.
32. Drilling point 331, appendix number 35, and list 3. In the CD from 31-1 to 31-5.
33. Drilling point 332, appendix number 36, and list 1. In the CD from 32-1 to 32-4.
34. Geological section (a) of the line's number 63, scale 1:2000. /1990-1992yaers survey/. In the CD from 33-1 to 33-4.
35. Drilling point 332, appendix number 36, and list 3. In the CD from 34-1 to 34-6.



36. Geological section (b) of the line's number 63, scale 1:2000. /1990-1992yaers survey/. In the CD from 35-1 to 35-3.
37. Qualitative interpretation map of the Baglaa and Intermediate /Promejutochnii/ areas, scale 1:10000. In the CD from 36-1 to 36-8.
38. Provoked polarization /IP/ map of the Baglaa and Intermediate /Promejutochnii/ areas, scale 1:10000. In the CD from 37-1 to 37-7.
39. Geoelectric section of the line's number 8<sup>a</sup>, 13<sup>a</sup> and 18<sup>a</sup>, scale 1:10000. In the CD from 38-1 to 38-4.
40. Geological section (b) of the line's number XLVII, scale 1:2000. /1990-1992yaers survey/. In the CD from 39-1 to 39-4.
41. Geological section (a) of the line's number XLVII, scale 1:2000. /1990-1992yaers survey/. In the CD from 40-1 to 40-3.
42. Geological map of the Erdenet area, scale 1:50000. In the CD from 41-1 to 41-4.
43. Goncharov. V.N.(1986-1988): Report of detailing survey in the Central area/ Erdenet area.
44. Kholmetskii. S.N.(1986-1990): Report of detailing survey in the Oyut area/ SE of Erdenet area.
45. J. Lkhamsuren et al (2001): Distribution map of mineral deposits and occurrences in Mongolia (Metals and industrial minerals),

**Appendix 2 Description of thin sections in the western Erdenet area**

Ser. No.	Sample No.	Area	Coordinates		Geolo. Unit	Rock Name	Texture	Phenocrysts, crystals													Secondary Minerals										Remarks						
			N	E				quartz	K-feldspar	plagioclase	muscovite	biotite	hornblende	clinopyroxene	orthopyroxene	apatite	zircon	glass	opeq minerals	quartz	muscovite	biotite	stercite	chlorite	epidote	carbonate	rutile	pyrite	limonite	opeq minerals							
1	MA1045	Zuukhiin gol	49° 15' 28"	104° 14' 25"	γ & 3P2-T1s	granodiorite	hypidiomorphic granular	⊕	⊕	⊕		○																								malachite(?)	
2	MA1052	Zuukhiin gol	49° 15' 26"	103° 16' 43"	γ & 3P2-T1s	basaltic lapilli tuff	pyroclastic			⊕																									basaltic fragments(⊕), chlorite vein, iron oxide		
3	MB1052	Zuukhiin gol	49° 13' 25"	104° 14' 24"	γ & 3P2-T1s	liparite	porphyritic, flow structure	⊕	○	△	○																										
4	MB1053	Zuukhiin gol	49° 13' 26"	104° 15' 05"	γ & 3P2-T1s	rhyolite	glassy, porphyritic and flow structure	⊕	○	△		△																									
5	MB1060	Zuukhiin gol	49° 14' 05"	104° 13' 17"	γ & 3P2-T1s	granodiorite	hypidiomorphic granular	⊕	○	⊕		○	△																								
6	MC1074	Zuukhiin gol	49° 15' 24"	104° 12' 46"	γ & 3P2-T1s	micro-gabbro	granular	△		⊕		⊕	△																								epidote vein
7	MC1075	Zuukhiin gol	49° 15' 09"	104° 13' 01"	γ & 3P2-T1s	diorite to gabbro	granular	△		⊕		△	○	△	△																						
8	MC1076	Zuukhiin gol	49° 15' 05"	104° 13' 16"	γ & 3P2-T1s	granodiorite	hypidiomorphic-granular	⊕	⊕	⊕		○	△																								
9	MC1077	Zuukhiin gol	49° 14' 59"	104° 13' 26"	γ & 3P2-T1s	granite	hypidiomorphic-granular	⊕	⊕	⊕		○	△																								
10	MC1089	Zuukhiin gol	49° 12' 15"	104° 13' 12"	γ & 3P2-T1s	strongly silicified rock						△																									alunite(O)
11	MC1090	Zuukhiin gol	49° 12' 03"	104° 13' 31"	γ & 3P2-T1s	granodiorite	hypidiomorphic-granular	⊕	⊕	⊕		○	○																								
12	MA1077	Mogoin gol	48° 46' 15"	104° 15' 34"	γ & 3P2-T1s	liparite	intersertal and porphyritic	⊕	⊕	⊕		△	△																								phenocryst (Pl, K-feldspar)
13	MA1078	Mogoin gol	48° 46' 15"	103° 16' 43"	γ & 3P2-T1s	andesite altered	intersertal and porphyritic			⊕																										phenocryst (Pl)	
14	AM1080	Mogoin gol	49° 10' 06"	103° 45' 42"	γ & 3P2-T1s	secondary quartzite	granular																													topaz(O), hematite(△), tourmaline(O)	
15	MB1064	Mogoin gol	49° 12' 19"	103° 47' 19"	γ & 3P2-T1s	granite brecciated	hypidiomorphic granular	⊕	⊕	○		?																									
16	MB1066	Mogoin gol	49° 12' 28"	103° 46' 43"	γ & 3P2-T1s	granite	hypidiomorphic granular	⊕	⊕	○		○	△																								
17	MB1070	Mogoin gol	49° 11' 28"	103° 46' 04"	γ & 3P2-T1s	granodiorite porphyry	porphyritic	⊕	○	⊕		○	△																								
18	MC1098	Mogoin gol	49° 12' 27"	103° 45' 04"	γ & 3P2-T1s	diorite altered	language training	○	⊕	⊕		○	?																								
19	MC1103	Mogoin gol	49° 11' 52"	103° 45' 13"	γ & 3P2-T1s	brecciated andesitic tuff	pyroclastic																														basaltic and crystal fragments
20	MC1110	Mogoin gol	49° 11' 16"	103° 47' 15"	γ & 3P2-T1s	granodiorite	language training	○	⊕	⊕		○	△																								
21	MA1095	Khujiriin gol	49° 07' 41"	103° 38' 58"	γ & 3P2-T1s	granodiorite porphyry	porphyritic	⊕	⊕	⊕		△																									
22	MA1101	Khujiriin gol	48° 46' 15"	103° 16' 43"	γ & 3P2-T1s	granodiorite altered	hypidiomorphic granular	⊕	⊕	⊕		○																									
23	MA1104	Khujiriin gol	49° 08' 15"	103° 34' 08"	γ & 3P2-T1s	granodiorite	hypidiomorphic granular	⊕	⊕	⊕		○	○																								
24	MA1105	Khujiriin gol	49° 08' 18"	103° 34' 48"	γ & 3P2-T1s	granodiorite porphyry	hypidiomorphic granular	⊕	⊕	⊕		○	○																								
25	MA1116	Khujiriin gol	48° 52' 16"	103° 46' 46"	γ & 3P2-T1s	granodiorite altered	hypidiomorphic granular	⊕	⊕	⊕		○	○																								

⊕: abundant, ○: common, △: a little, -: rare, ?: uncertain

Ser. No.	Sample No.	Area	Coordinates		Geolo. Unit	Rock Name	Texture	Phenocrysts, crystals													Secondary Minerals										Remarks
			N	E				quartz	K-feldspar	plagioclase	muscovite	biotite	hornblende	clinopyroxene	orthopyroxene	apatite	zircon	glass	opaque minerals	quartz	muscovite	biotite	sericite	chlorite	epidote	carbonate	rutile	pyrite	limonite	opaque minerals	
26	MB1084	Khujiriin gol	49° 06'48"	103° 37'40"	γ 3P2-T1s	gabbro	granular	Δ	⊗			Δ	○	Δ	Δ	.	.	.	Δ								?	.	actinolite (○)		
27	MB1086	Khujiriin gol	49° 07'16"	103° 35'58"	γ 3P2-T1s	granite porphyry	hypidiomorphic-granular, porphyritic	⊗	⊗	⊗		Δ						.	Δ		○	Δ					?	.			
28	MB1093	Khujiriin gol	49° 07'39"	103° 34'05"	γ 3P2-T1s	granite porphyry	hypidiomorphic-granular, porphyritic	⊗	⊗	⊗		○	Δ		.	.	.	Δ		Δ		.					?	.			
29	MC1119①	Khujiriin gol	49° 08'07"	103° 38'18"	γ 3P2-T1s	granodiorite porphyry strongly silicified	hypidiomorphic-granular	○	⊗	⊗		?	?		.	.	.	○		Δ		⊗				?	.	phenocryst (Pl)			
30	MC1130	Khujiriin gol	49° 08'52"	103° 37'35"	γ 3P2-T1s	andesite porphyry	porphyritic	○	○	⊗		?	○		.	.	.	Δ		Δ	⊗	Δ				?	.	phenocryst (Pl, Horn)			
31	MC1137	Khujiriin gol	48° 08'15"	103° 38'50"	γ 3P2-T1s	gabbro	granular	○	Δ	⊗		Δ	○		.	.	.	Δ		Δ	Δ					?	.				
32	MA1039	Tsagaan Chuluut	49° 03'41"	103° 59'42"	γ 3P2-T1s	andesite	intersertal and porphyritic			⊗			○	.	.	.	○	.		Δ	.	.				.	.	Phenocryst: Pl (○)			
33	MB1029	Tsagaan Chuluut	49° 03'33"	104° 03'00"	γ 3P2-T1s	coarse tuff altered	pyroclastic												⊗		Δ					.	○	basaltic fragments (⊗), kaolinite (⊗), alunite (⊗)			
34	MB1030	Tsagaan Chuluut	49° 03'34"	104° 02'45"	γ 3P2-T1s	andesite strongly altered	pyroclastic			⊗									⊗		⊗		Δ			.					
35	MB1035	Tsagaan Chuluut	49° 04'04"	104° 03'58"	γ 3P2-T1s	silicified rock													⊗		Δ						.				
36	MC1034	Tsagaan Chuluut	49° 02'15"	104° 04'09"	γ 3P2-T1s	strongly silicified rock													⊗		⊗			Δ	Δ	Δ	hematite (Δ), alunite (○)				
37	MC1037	Tsagaan Chuluut	49° 02'33"	104° 03'36"	γ 3P2-T1s	strongly altered rock	porphyritic	○											⊗		Δ			Δ	Δ	Δ	hematite (Δ)				
38	MC1038	Tsagaan Chuluut	49° 02'31"	104° 02'43"	γ 3P2-T1s	andesite	intersertal and porphyritic			⊗								.			Δ	○					.				
39	MC1042	Tsagaan Chuluut	49° 02'22"	104° 00'25"	γ 3P2-T1s	diorite	granular	○		⊗		Δ	○		.	.	.				Δ	.					.	chromian spinel (Δ)			
40	MC1043①	Tsagaan Chuluut	49° 02'47"	104° 00'18"	γ 3P2-T1s	strongly silicified rock													⊗		⊗						.	alunite (○), smectite (Δ)			
41	MC1044	Tsagaan Chuluut	49° 02'31"	103° 59'37"	γ 3P2-T1s	basaltic andesite	porphyritic and intersertal			⊗			Δ	Δ					Δ		○						Δ				
42	MC1048	Tsagaan Chuluut	49° 02'50"	104° 02'21"	γ 3P2-T1s	strongly silicified rock													⊗		○	Δ					.				
43	MC1053	Tsagaan Chuluut	49° 02'55"	104° 00'20"	γ 3P2-T1s	strongly silicified rock													⊗		Δ						.	kaolinite (⊗), pyrrhotite (Δ), alunite (⊗), hematite (Δ)			
44	MC1057	Tsagaan Chuluut	49° 03'13"	104° 00'33"	γ 3P2-T1s	andesite porphyry	porphyritic and intersertal			⊗		Δ	Δ		.	.	.	○		Δ	Δ		Δ				.	phenocryst (PL)			
45	MC1060	Tsagaan Chuluut	49° 02'11"	104° 01'14"	γ 3P2-T1s	granodiorite	hypidiomorphic-granular	⊗	⊗	⊗		○	○		.	.	.				Δ	Δ	.				.	actinolite (Δ)			
46	MA1010	Erdenet Mine	49° 59'38"	104° 10'02"	γ 3T1s	diorite silicified	porphyritic	⊗	Δ	⊗		Δ			.	.	.	Δ		Δ	Δ	Δ	.	?	.	Phenocryst: Pl > Qz, iron oxide					
47	MA1012	Erdenet Mine	48° 59'52"	104° 09'33"	γ 3P2-T1s	andesite silicified	porphyritic	Δ	⊗	○	Δ				.	.	Δ	.	○		Δ	.	.	○			Phenocryst: Pl (Δ)				
48	MA1014	Erdenet Mine	48° 59'25"	104° 09'56"	γ 3P2-T1s	granodiorite strongly silicified		○	?	?									○		⊗	Δ	○	Δ		Δ	Azurite vein (Δ), malachite (○), quartz vein				
49	MC1008②	Erdenet Mine	49° 00'52"	104° 09'00"	γ 3P2-T1s	granite porphyry	porphyritic	⊗	○	⊗		Δ			.	.	.				.	.					.	phenocryst (Qtz, Pl)			
50	MC1014	Erdenet Mine	49° 00'51"	104° 09'02"	γ 3P2-T1s	granodiorite	hypidiomorphic-granular	⊗	○	⊗		Δ	○		.	.	.				.	Δ					.				

⊗: abundant, ○: common, Δ: a little, .: rare, ?: uncertain

Ser. No.	Sample No.	Area	Coordinates		Geolo. Unit	Rock Name	Texture	Phenocrysts, crystals												Secondary Minerals									Remarks									
			N	E				quartz	K-feldspar	plagioclase	muscovite	biotite	hornblende	clinopyroxene	orthopyroxene	apatite	zircon	glass	opaque minerals	quartz	muscovite	biotite	sericite	chlorite	epidote	carbonate	rutile	pyrite		limonite	opaque minerals							
51	MC1021	Erdenet Mine	48° 53' 07"	104° 11' 17"	γ ε 3P2-T1s	granite	hypidiomorphic-granular	⊗	⊗	⊗		Δ																										
52	MA1118	Danbatseren	48° 51' 45"	103° 47' 13"	γ ε 3P2-T1s	secondary quartzite	granular												⊗																Δ	Secondary K-feldspar		
53	MB1114	Danbatseren	48° 45' 25"	103° 14' 55"	γ ε 3P2-T1s	granodiorite	hypidiomorphic-granular	⊗	⊗	⊗		Δ	○																									
54	MC1171	Undrakh	48° 42' 43"	102° 46' 51"	γ ε 3P2-T1s	micro-granite	granular	⊗	⊗	⊗		○																										
55	MA1121	Tsookher mert	48° 46' 15"	103° 16' 43"	γ ε 3P2-T1s	granodiorite porphyry	porphyritic	⊗	⊗	⊗		○	○																									
56	MA1128	Tsookher mert	48° 42' 03"	102° 45' 45"	γ ε 3P2-T1s	granite	hypidiomorphic granular	⊗	⊗	⊗		○																										
57	MB1083	Khujiriin gol	49° 07' 15"	103° 37' 53"	γ ε 3P2-T1s	basalt	intersertal			⊗																												
58	MB1120	Tsookher mert	48° 45' 47"	103° 16' 43"	γ ε 3P2-T1s	granodiorite porphyry	porphyritic	⊗	⊗	⊗		○	Δ																									
59	MB1128	Tsookher mert	48° 45' 44"	103° 15' 52"	γ ε 3P2-T1s	granite	hypidiomorphic-granular	⊗	⊗	⊗		○																										
60	MB1130	Tsookher mert	48° 45' 32"	103° 15' 42"	γ ε 3P2-T1s	granodiorite	hypidiomorphic-granular	⊗	⊗	○		○	○																									
61	MC1153	Tsookher mert	48° 45' 51"	103° 18' 40"	γ ε 3P2-T1s	basalt	intersertal			⊗			○	Δ																								
62	MC1161	Tsookher mert	48° 45' 16"	103° 16' 13"	γ ε 3P2-T1s	micro-diorite	ophitic	⊗	⊗	⊗		○																										

⊗: abundant, ○: common, Δ: a little, -: rare, ?: uncertain

**Appendix 3 Description of polished thin sections in the western Erdenet area**

Microscope observation of polished thin section

Ser. No.	Sample No.	Area	Coordinates		Description	Phenocrysts, crystals										Secondary Minerals					Ore Minerals										Remarks					
			N	E		quartz	K-feldspar	plagioclase	biotite	hornblende	orthopyroxene	clinopyroxene	apatite	Zircon	opaque minerals	quartz	biotite	sericite	chlorite	epidote	carbonate	pyrite	goethite	hematite	limonite	magnetite	chalcocopyrite	chalcocite	covellite	bornite		pyrrhotite				
1	MA1058	Zuukhiin gol	49° 13' 03"	104° 13' 05"	silicified granodiorite with malachite along the fractures	⊙	⊙	⊙	○																										malachite(+), sphene(+)	
2	MA1065	Zuukhiin gol	49° 13' 15"	104° 12' 24"	silicified granodiorite with malachite spots	⊙	⊙	⊙	○																											
3	MC1079	Zuukhiin gol	49° 13' 05"	104° 13' 35"	weak altered, granodiorite with malachite along the fracture.	⊙	⊙	⊙																											malachite(Δ)	
4	MA1081	Mogoin gol	49° 10' 03"	103° 45' 29"	brown to white secondary quartzite with lm + hematite + goethite.																														kaolinite(Δ)	
5	MB1071	Mogoin gol	49° 11' 17"	103° 45' 56"	ore mineral veins with specularite in silicified andesite. N28W, W:11mm																														hematite vein	
6	MB1073	Mogoin gol	49° 11' 18"	103° 45' 54"	silicified rock with specularite.	⊙	⊙																												dissemination	
7	MA1094	Khujiriin gol	49° 07' 45"	103° 39' 03"	micro-quartz veins, network quartz veinlets in basalt			⊙																												
8	MB1091	Khujiriin gol	49° 07' 30"	103° 34' 22"	sphalerite veinlets in granite to syenite. N88E79N, W:1cm	⊙	⊙	⊙																												
9	MB1092	Khujiriin gol	49° 07' 30"	103° 34' 22"	sphalerite-quartz veinlets in granite or syenite. N79E55N, W:4cm.	⊙	⊙	⊙																												
10	MB1096	Khujiriin gol	49° 08' 10"	103° 35' 06"	float stones of quartz vein with malachite in syenite to granite.	⊙	⊙	⊙	○																											
11	MB1100	Khujiriin gol	49° 07' 59"	103° 35' 30"	quartz vein with malachite in syenite. N73E48N	⊙	⊙	⊙																												
12	MC1117	Khujiriin gol	49° 07' 51"	103° 37' 18"	weak altered, granodiorite with malachite along the fracture.	⊙	○	⊙																												
13	MC1120	Khujiriin gol	49° 08' 19"	103° 38' 39"	quartz vein in granodiorite with malachite and hematite.	⊙	○	Δ																												malachite(Δ)
14	MC1136	Khujiriin gol	49° 07' 57"	103° 37' 18"	brecciated syenite with quartz veinlets and stockwork with malachite.	⊙	⊙	⊙																												malachite(Δ)
15	MA1118	Danbatseren	48° 51' 45"	103° 47' 13"	strongly silicified rock (secondary quartzite?)	⊙	-																													
16	MA1130	Undrakh	48° 42' 30"	102° 45' 49"	pink, fine grained, aplitic granite	⊙	○	⊙																												
17	MB1131	Tsookher mert	48° 45' 32"	103° 15' 42"	quartz vein with malachite in syenite. N73E48N	⊙	⊙	⊙																												
18	MB1132	Tsookher mert	48° 45' 28"	103° 15' 39"	quartz vein with malachite in syenite. N73E48N	⊙	⊙	⊙																												azurite(Δ), malachite(+)
19	MC1157②	Tsookher mert	48° 45' 38"	103° 19' 26"	weakly altered granodiorite.	⊙		⊙																												
20	MC1162	Tsookher mert	48° 45' 28"	103° 16' 02"	quartz veinlets in granite with malachite, azurite, hematite.	⊙	⊙	⊙																												
21	MC1163	Tsookher mert	48° 45' 29"	103° 16' 01"	quartz vein with malachite, hematite, iron oxides.	⊙	Δ	⊙																												smectite(Δ)

⊙: abundant, ○: common, Δ: a little, -: rare, ?: uncertain

**Appendix 4 Results of X-ray diffraction analyses in the western Erdenet area**





Ser. No.	Sample No.	Location (Area)	Coordination			Description	silicate														sulph	car	other minerals							Remarks											
			N	E			sli		feldspar			clay						other					pyrite	hematite	epidote	rutile	goethite	marcasite													
							Quartz	plagioclase	K-feldspar	Albite	sericite	chlorite	kaolin	smectite	pyrophyllite	S/S	C/S	hornblende	augite	biotite									alunite		jarosite	calcite									
31	MC1087	Zuukhiin gol	49°12'17"	104°12'53"		dyke	basalt to andesite weakly altered with chlorite	⊙		△	⊙		○																								prenite ?				
32	MA1070	Mogoin gol	49°09'29"	103°45'34"		P1-2	basalt	⊙		⊙	⊙																														
33	MA1069	Mogoin gol	49°09'35"	103°45'44"		P1-2	basalt to andesite	⊙		⊙	⊙																														
34	MA1077	Mogoin gol	49°10'40"	103°46'12"		P1-2	andesite to basalt with plagioclase phenocryst	⊙		⊙	⊙																														
35	MA1078	Mogoin gol	49°10'15"	103°46'00"		P1-2	basalt	⊙		⊙	⊙																														
36	MA1079	Mogoin gol	49°10'07"	103°45'44"		P1-2	altered rock with strong silicification and iron oxidation	⊙																														andalusite			
37	MA1080	Mogoin gol	49°10'06"	103°45'42"		P1-2	strong altered rock with quartz network	⊙																														topaz+andalusite			
38	MA1081	Mogoin gol	49°10'03"	103°45'29"		P1-2	brown to white secondary quartzite with lm + hematite + goethite	⊙																																	
39	MA1083	Mogoin gol	49°10'29"	103°44'36"		P1-2	basalt (fresh)	⊙		△	⊙																														
40	MA1085	Mogoin gol	49°09'55"	103°45'32"		P1-2	altered rock	⊙																																	
41	MB1064	Mogoin gol	49°12'19"	103°47'19"		γ3T1s	granite or syenite	⊙		⊙	⊙																														
42	MB1067	Mogoin gol	49°12'26"	103°45'19"		γδ2T1s	granite or syenite	⊙		⊙	⊙																														
43	MB1069	Mogoin gol	49°11'45"	103°46'10"		P1-2	andesite weakly silicified	⊙		⊙	⊙																														
44	MB1070	Mogoin gol	49°11'28"	103°46'04"		δ1T1s	porphyrite with chlorite and epidote	⊙		○	⊙																														
45	MB1071	Mogoin gol	49°11'17"	103°45'56"		P1-2	ore mineral veins with specularite in silicified andesite. N28W, W:11mm	⊙																																	
46	MB1073	Mogoin gol	49°11'18"	103°45'54"		P1-2	silicified rock with specularite.	⊙		⊙																															
47	MB1074	Mogoin gol	49°11'22"	103°45'29"		P1-2	silicified rock with pyrite dissemination	⊙																																	
48	MB1075	Mogoin gol	49°11'11"	103°45'14"		P1-2	andesite with plagioclase phenocryst	⊙		○	⊙																														
49	MC1096	Mogoin gol	49°11'55"	103°47'06"		P1-2	basalt to andesite weakly altered with chlorite	⊙		⊙	⊙																														
50	MC1100	Mogoin gol	49°12'06"	103°45'04"		P1-2	basalt to andesite weakly altered with chlorite	⊙		△	⊙																														
51	MC1101	Mogoin gol	49°11'01"	103°45'12"		δ1T1s	diorite weakly altered with quartz veinlets	⊙																																	
52	MC1109	Mogoin gol	49°11'18"	104°12'46"		P1-2	andesite moderately altered with sericite	⊙		△																															
53	MC1110	Mogoin gol	49°15'24"	104°46'37"		γδ2T1s	granodiorite porphyry weakly altered with chlorite and K-alteration	⊙		⊙	⊙																														
54	MC1111	Mogoin gol	49°11'28"	103°47'35"		γδ2T1s	granodiorite moderately altered with silicification and sericite	⊙		⊙	⊙																														
55	MC1112	Mogoin gol	49°11'31"	103°47'24"		P1-2	basalt andesite strongly altered with silicification and sericite	⊙		△																															
56	MA1091	Khujirgin gol	49°07'30"	103°39'46"		δ1T1s	granodiorite with iron oxidation and weak chloritization	⊙		△	⊙																														
57	MA1093	Khujirgin gol	49°07'71"	103°38'56"		γδ2T1s	granodiorite with strong silicification	⊙																																	
58	MA1094a	Khujirgin gol	49°07'45"	103°39'03"		γδ2T1s	micro-quartz veins, network quartz veinlets in basalt	⊙		⊙	⊙																														
59	MA1095	Khujirgin gol	49°07'54"	103°39'29"		γδ2T1s	Granodiorite	⊙		⊙	⊙																														
60	MA1100	Khujirgin gol	49°08'24"	103°36'03"		γδ2T1s	andesite to basalt with weak silicification	⊙		○	⊙																														

⊙: abundant, ○: common, △: a little, ·: rare, ? : uncertain

Ser. No.	Sample No.	Location (Area)	Coordination			Description	silicate																Remarks																		
			N	E			sli	feldspar			clay						other			sulph	car	other minerals																			
								Quartz	plagioclase	K-feldspar	Albite	sericite	chlorite	kaolin	smectite	pyrophyllite	S/S	C/S	hornblende			augite		biotite	alunite	jarosite	calcite	pyrite	hematite	epidote	rutile	goethite	marcasite								
61	MA1101	Khujiriin gol	49°08'27"	103°35'32"	$\gamma \delta 2T1s$	granodiorite with silicification	⊙		⊙	⊙	•	⊙																													
62	MA1103	Khujiriin gol	49°08'56"	103°34'53"	$\gamma \delta 2T1s$	medium grained granodiorite	⊙		⊙	⊙									○		⊙																				
63	MA1104	Khujiriin gol	49°08'15"	103°34'08"	$\gamma \delta 2T1s$	medium grained granodiorite	⊙	⊙		⊙									○		•																				
64	MA 1105	Khujiriin gol	49°08'18"	103°34'48"	$\gamma \delta 2T1s$	Granodiorite	⊙	⊙		⊙	△								△																						
65	MB 1083	Khujiriin gol	49°07'15"	103°37'53"	$\delta 1T1s$	Diorite	○		⊙	⊙									○																						
66	MB1086	Khujiriin gol	49°07'16"	103°35'58"	$\gamma \delta 2T1s$	granite or syenite with epidote and chlorite	⊙		⊙	⊙	△	△																													
67	MB1088	Khujiriin gol	49°07'42"	103°36'05"	$\gamma \delta 2T1s$	granite or syenite with epidote and chlorite	⊙			⊙	△	○																													
68	MB1090	Khujiriin gol	49°07'30"	103°34'33"	$\gamma \delta 2T1s$	silicified granite with quartz-malachite	⊙				•																														
69	MB1091a	Khujiriin gol	49°07'30"	103°34'22"	$\gamma \delta 2T1s$	sphalerite veinlets in granite to syenite. N88E79N, W:1cm	⊙		⊙	⊙	•	○																													
70	MB1092a	Khujiriin gol	49°07'30"	103°34'22"	$\gamma \delta 2T1s$	sphalerite quartz vein. N79E55N, W:4cm	⊙		⊙	⊙	•	△																													
71	MB 1093	Khujiriin gol	49°07'39"	103°34'05"	$\gamma \delta 2T1s$	Granitic syenite	⊙		⊙	⊙									△		△																				
72	MB1096a	Khujiriin gol	49°08'10"	103°35'06"	$\gamma \delta 2T1s$	float stones of quartz vein with malachite in syenite to granite.	⊙		⊙	⊙		○																													
73	MB1100	Khujiriin gol	49°07'59"	103°35'30"	$\gamma \delta 2T1s$	quartz vein with malachite in syenite. N73E48N	⊙		⊙	⊙		⊙																													
74	MC1117	Khujiriin gol	49°07'51"	103°37'18"	$\gamma \delta 2T1s$	weak altered, granodiorite with malachite along the fracture.	⊙		○	⊙		○																													
75	MC1119②	Khujiriin gol	49°08'07"	103°38'18"	$\gamma \delta 2T1s$	stockwork quartz vein in basalts.	⊙		⊙	⊙		△																													
76	MC1120	Khujiriin gol	49°08'19"	103°38'39"	$\gamma \delta 2T1s$	quartz vein in granodiorite with malachite and hematite.	⊙		⊙	△		△																													
77	MC1124	Khujiriin gol	49°08'30"	103°37'09"	$\delta 1T1s$	andesite moderately altered with silicification and sericite	⊙			⊙																															
78	MC1126	Khujiriin gol	49°08'57"	103°13'21"	$\gamma \delta 2T1s$	granodiorite to syenitic granodiorite weakly altered with chlorite and silicification	△		⊙	⊙									⊙																						
79	MC1130	Khujiriin gol	49°08'52"	103°37'35"	$\gamma \delta 2T1s$	syenite porphyry moderately altered	⊙		⊙	⊙		○							○																						
80	MC1132	Khujiriin gol	49°08'59"	103°38'28"	$\gamma \delta 2T1s$	syenite granodiorite weakly altered with silicification	○		○	⊙		•	○						○																						
81	MC1136	Khujiriin gol	49°07'57"	103°37'18"	$\gamma \delta 2T1s$	brecciated syenite with quartz veinlets and stockwork with malachite.	⊙		⊙	⊙		○																													
82	MC1137	Khujiriin gol	49°08'15"	103°38'50"	$\gamma \delta 2T1s$	fine grained granodiorite	⊙		⊙	⊙		△							○																						
83	MC1138①	Khujiriin gol	49°08'18"	103°38'49"	$\gamma \delta 2T1s$	quartz vein, N60E75N	⊙		○	○		•	○																												
84	MA1024	Tsagaan Chuluut	49°04'15"	103°58'53"	T3-J1mg	basalt	⊙					⊙																													
85	MA1028	Tsagaan Chuluut	49°03'21"	104°01'14"	T3-J1mg	granite with strong weathering	⊙																																		
86	MA1029	Tsagaan Chuluut	49°03'40"	104°01'52"	T3-J1mg	andesitic basalt with moderate oxidation	⊙			⊙	•		△																												
87	MA1030	Tsagaan Chuluut	49°03'41"	104°02'18"	T3-J1mg	volcanic breccia with plagioclase phenocryst	⊙					•									⊙																				
88	MA1031	Tsagaan Chuluut	49°03'40"	104°01'38"	T3-J1mg	altered rock with strong silicification	⊙						○																												
89	MA1032	Tsagaan Chuluut	49°03'41"	104°00'43"	T3-J1mg	altered rock, volcanic breccia with strong silicification	⊙					•																													
90	MA1033	Tsagaan Chuluut	49°02'43"	104°00'16"	T3-J1mg	andesite with strong silicification	⊙		⊙	○		△																													

⊙: abundant, ○: common, △: a little, •: rare, ? : uncertain

Ser. No.	Sample No.	Location (Area)	Coordination			Description	silicate																	sulph	car	other minerals							Remarks
			N	E			sl	feldspar			clay							other			alunite	jarosite	calcite			pyrite	hematite	epidote	rutile	goethite	marcasite		
							Quartz	plagioclase	K-feldspar	Albite	sericite	chlorite	kaolin	smectite	pyrophyllite	S/S	C/S	hornblende	augite	biotite													
91	MA1034	Tsagaan Chuluut	49°03'53"	104°00'05"	T3-J1mg	andesite porphyry with iron oxidation along the fracture	⊙	Δ	⊙	Δ																							
92	MA1035	Tsagaan Chuluut	49°03'53"	104°59'46"	T3-J1mg	altered volcanic rock	⊙					○									Δ												
93	MA1036	Tsagaan Chuluut	49°03'43"	103°58'51"	T3-J1mg	basalt to andesite	⊙		⊙	○	Δ													○	?								
94	MA1037	Tsagaan Chuluut	49°03'46"	103°59'10"	T3-J1mg	brecciated basalt with moderate silicification	⊙				Δ	○									⊙												
95	MA1039	Tsagaan Chuluut	49°03'41"	103°59'42"	T3-J1mg	andesite to basalt	⊙		⊙	⊙	○														Δ								
96	MA1041	Tsagaan Chuluut	49°03'18"	103°59'28"	T3-J1mg	altered rock in big alteration zone	⊙				.	Δ									⊙					Δ							
97	MA1042	Tsagaan Chuluut	49°03'33"	103°59'03"	T3-J1mg	altered volcanic rock	⊙		⊙	.	Δ													○									
98	MA1043	Tsagaan Chuluut	49°02'58"	103°59'45"	T3-J1mg	brecciated volcanic rock with iron oxidation	⊙		○	⊙	.																						
99	MB1028	Tsagaan Chuluut	49°04'47"	104°04'23"	γ δ 2P2-T1s	andesite with strong silicification	⊙				.										⊙												
100	MB1029	Tsagaan Chuluut	49°03'33"	104°03'00"	T3-J1mg	coarse tuff with silicification	⊙					⊙									⊙												
101	MB1030	Tsagaan Chuluut	49°03'34"	104°02'45"	T3-J1mg	strongly silicified rock with andesite	⊙														Δ					Δ	Δ						
102	MB1031	Tsagaan Chuluut	49°03'34"	104°02'45"	T3-J1mg	strongly silicified rock with andesite	⊙														⊙					Δ							
103	MB1033	Tsagaan Chuluut	49°04'17"	104°04'51"	γ δ 2P2-T1s	aplite with silicification	⊙		○	⊙	.												.										
104	MB1035	Tsagaan Chuluut	49°04'04"	104°03'58"	γ δ 2P2-T1s	aplite with epidotization	⊙														⊙												
105	MB1036	Tsagaan Chuluut	49°03'38"	104°03'28"	T3-J1mg	lapilli tuff silicified	⊙					⊙									Δ		Δ										
106	MB1037	Tsagaan Chuluut	49°03'45"	104°03'11"	T3-J1mg	strongly silicified rock with andesite	⊙																										
107	MB1038	Tsagaan Chuluut	49°03'58"	104°04'15"	γ δ 2P2-T1s	syenite with biotite	⊙		○	⊙	.	Δ											○			Δ							
108	MC 1034	Tsagaan Chuluut	49°02'15"	104°04'09"	γ δ 2P2-T1s	silicified granite porphyry with chlorite, epidote, sericite and pyrite dissemination	⊙														⊙				Δ		Δ						
109	MC 1035	Tsagaan Chuluut	49°02'21"	104°04'09"	γ δ 2P2-T1s	silicified granite porphyry with chlorite, epidote, sericite and pyrite dissemination	⊙					⊙									Δ					Δ							
110	MC 1036	Tsagaan Chuluut	49°02'29"	104°03'56"	γ δ 2P2-T1s	brecciated granite porphyry with sericite and silicif	⊙						⊙								○			Δ									
111	MC1037	Tsagaan Chuluut	49°02'33"	104°03'36"	γ δ 2P2-T1s	granite porphyry with sericite and silicification	⊙																				Δ						
112	MC1038	Tsagaan Chuluut	49°02'31"	104°02'43"	T3-J1mg	basaltic to andesitic tuff	⊙			⊙	Δ															Δ							
113	MC1040	Tsagaan Chuluut	49°02'25"	104°02'21"	T3-J1mg	andesitic tuff	⊙														○												
114	MC1041	Tsagaan Chuluut	49°02'16"	104°01'03"	T3-J1mg	andesite porphyry with chlorite and epidote	⊙		Δ	⊙	Δ																						
115	MC1042	Tsagaan Chuluut	49°02'22"	104°00'25"	γ δ 2P2-T1s	granite with chlorite	⊙		⊙	⊙	.	Δ									○												
116	MC1044	Tsagaan Chuluut	49°02'31"	103°59'37"	T3-J1mg	basalt weakly altered	○		○	⊙	.		Δ												Δ								
117	MC1046	Tsagaan Chuluut	49°03'12"	104°01'39"	λ π T1-J1	granite porphyry with sericite and silicification	⊙														⊙				.								
118	MC1047	Tsagaan Chuluut	49°03'09"	104°01'56"	λ π T1-J1	granodiorite silicified and sericitized	⊙														⊙					Δ							
119	MC1048	Tsagaan Chuluut	49°02'50"	104°02'21"	λ π T1-J1	granite silicified and sericitized	⊙														⊙	Δ											
120	MC1049	Tsagaan Chuluut	49°02'52"	104°01'59"	T3-J1mg	basalt with chlorite and epidote	⊙			⊙	○															Δ							

⊙: abundant, ○: common, Δ: a little, .: rare, ?: uncertain



Ser. No.	Sample No.	Location (Area)	Coordination			Description	silicate													sulph	car	other minerals						Remarks											
			N	E			feldspar			clay					other			hematite	epidote			rutile	goethite	marcasite															
							Quartz	plagioclase	K-feldspar	Albite	sericite	chlorite	kaolin	smectite	pyrophyllit	S/S	C/S								hornblende	augite	biotite												
151	MB 1120	Tsookher mert	48° 45' 47"	103° 15' 10"	γ 3P2-T1s	syenite with biotite	⊙		⊙	⊙							Δ																						
152	MB 1122	Tsookher mert	48° 45' 48"	103° 15' 15"	γ 3P2-T1s	syenite with quartz veinlets	⊙				⊙																												
153	MB 1125	Tsookher mert	48° 45' 53"	103° 15' 24"	γ 3P2-T1s	aplite with silicification and sericitization	⊙		⊙	⊙	○																												
154	MB 1128	Tsookher mert	48° 45' 44"	103° 15' 52"	γ ξ 3P2-T1s	syenite with biotite	⊙		⊙	⊙																													
155	MB 1130	Tsookher mert	48° 45' 32"	103° 15' 42"	γ ξ 3P2-T1s	granodiorite with biotite and hornblende	⊙		⊙	⊙		Δ										○																	
156	MB1131	Tsookher mert	48° 45' 32"	103° 15' 42"	γ ξ 3P2-T1s	quartz vein with malachite in syenite. N73E48N	⊙		⊙	⊙		○													Δ	•													
157	MB1132	Tsookher mert	48° 45' 28"	103° 15' 39"	γ ξ 3P2-T1s	quartz vein with malachite in syenite. N73E48N	⊙		⊙	⊙	○																												
158	MC1152	Tsookher mert	48° 44' 59"	103° 17' 51"	γ ξ 3P2-T1s	granodiorite weakly altered with chlorite, K- alteration and silicification	⊙		⊙	⊙		Δ										Δ				•													
159	MC1157②	Tsookher mert	48° 45' 38"	103° 19' 26"	γ ξ 3P2-T1s	weakly altered granodiorite.	⊙			⊙		Δ																											
160	MC1161	Tsookher mert	48° 45' 16"	103° 16' 13"	γ ξ 3P2-T1s	basalt moderately alteration with silicification	⊙		⊙	⊙		•	•																										
161	MC1162	Tsookher mert	48° 45' 28"	103° 16' 02"	γ ξ 3P2-T1s	quartz veinlets in granite with malachite, azurite, hematite.	⊙		⊙	⊙		Δ	Δ																										
162	MC1163	Tsookher mert	48° 45' 29"	103° 16' 01"	γ ξ 3P2-T1s	quartz vein with malachite, hematite, iron oxides.	⊙		Δ	⊙		•	○																										?
163	MC1164	Tsookher mert	48° 45' 01"	103° 16' 06"	γ 3P2-T1s	quartz vein with malachite, azurite, hematite, iron oxides.	⊙		⊙	⊙		Δ														•													

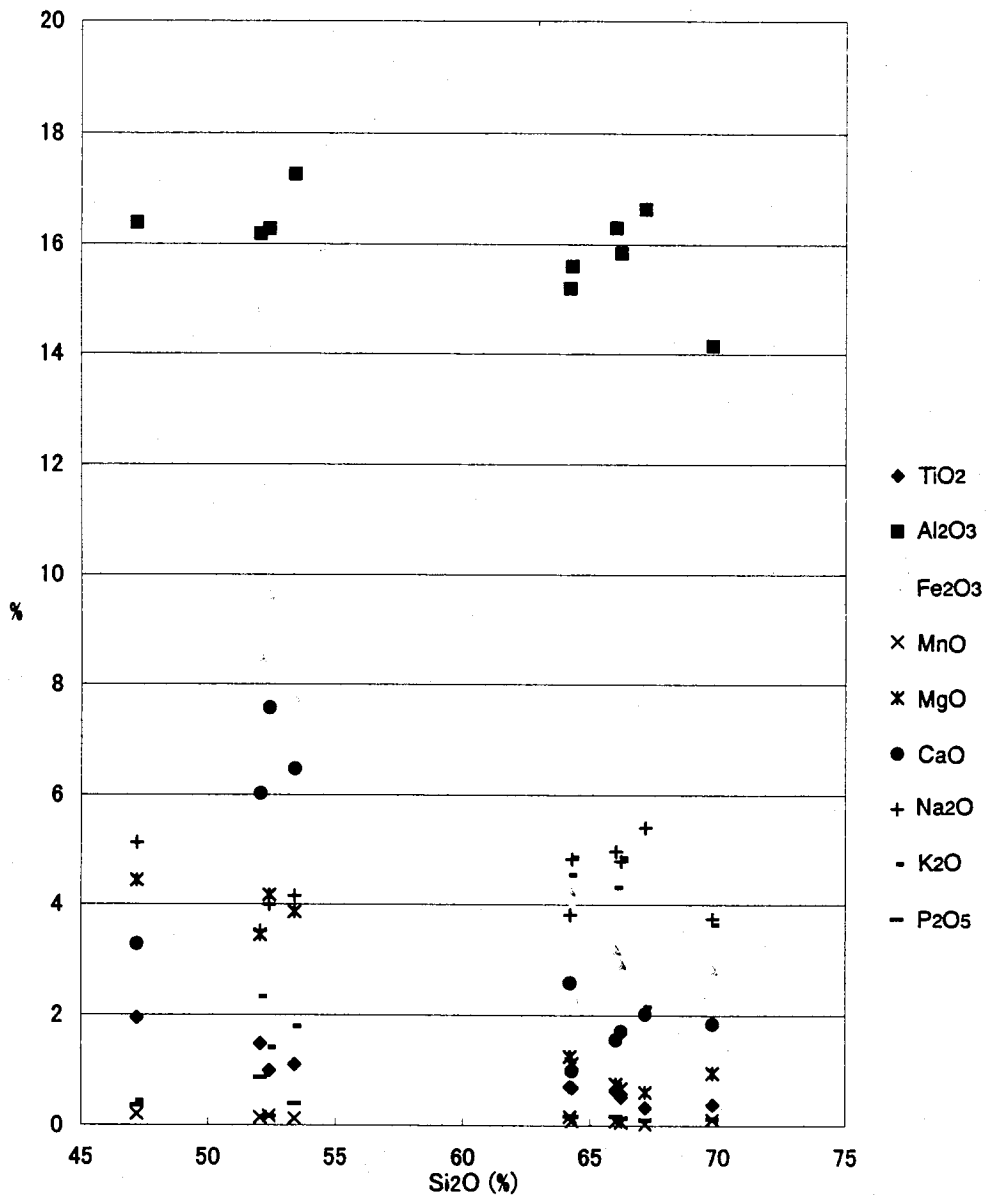
⊙: abundant, ○: common, Δ: a little, •: rare, ? : uncertain

**Appendix 5 Petrological chemical analyses, CIPW norms  
and petrological diagram for the rocks of  
Selenge granitic rocks and basalt in the western  
Erdenet area**

Result of whole rock analysis in the Western Erdenet area, Mongolia

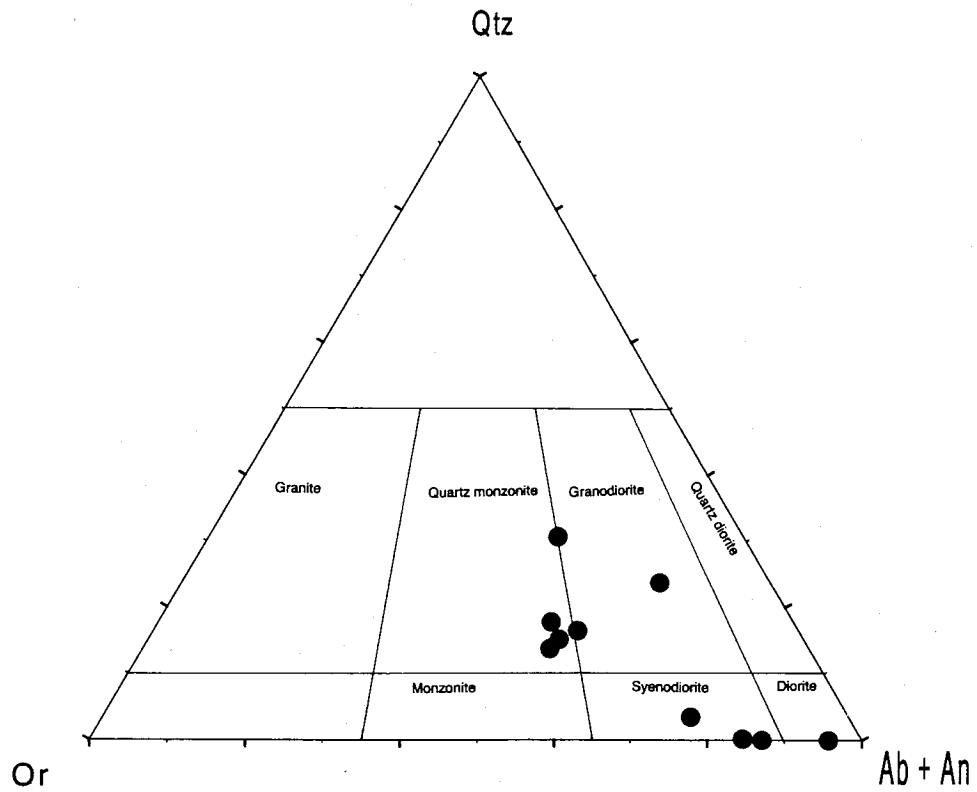
Ser. No.	1	2	3	4	5	6	7	8	9	10
Sample No.	MC 1074	MA 1095	MA 1105	MB 1093	MB 1083	MB 1084	MC 1119	MC 1006	MA 1121	MC 1153
Location (Area)	Zuukhiin gol	Khujiriin gol	Khujiriin gol	Khujiriin gol	Khujiriin gol	Khujiriin gol	Khujiriin gol	Erdenet Mine	Tsookher mert	Tsookher mert
Coordination	N	49° 15'24"	49° 07'54"	49° 08'18"	49° 07'39"	49° 07'15"	49° 06'48"	49° 08'07"	49° 46'15"	48° 45'51"
	E	104° 12'46"	103° 39'29"	103° 34'48"	103° 34'05"	103° 37'53"	103° 37'40"	103° 38'18"	104° 09'00"	103° 16'43"
Geological Unit	δ1P2-T1s	γδ2T1s	γδ2T1s	γδ2T1s	δ1T1s	δ1T1s	γδ2T1s	λδπP2-T1e	γξ3P2-T1s	Dyke
Rock Name	Gabbro	Granodiorite	Granodiorite	Granitic syenite	Diorite	Gabbro	Syenite	Granodiorite	Granodiorite	Basalt
SiO2	% XRF	52.41	64.29	66.01	66.21	53.40	64.22	67.16	69.80	52.06
TiO2	% XRF	0.99	0.69	0.63	0.52	1.10	1.94	0.33	0.38	1.48
Al2O3	% XRF	16.27	15.60	16.30	15.84	17.26	16.38	15.20	16.64	16.18
Fe2O3	% XRF	9.64	3.97	3.19	2.94	7.78	14.28	4.27	2.84	8.51
MnO	% XRF	0.17	0.08	0.08	0.06	0.12	0.20	0.16	0.03	0.14
MgO	% XRF	4.17	1.13	0.76	0.68	3.86	4.44	1.26	0.61	3.44
CaO	% XRF	7.57	1.00	1.56	1.71	6.47	3.27	2.58	1.84	6.02
Na2O	% XRF	3.99	4.83	4.97	4.79	4.15	5.12	3.81	5.40	3.51
K2O	% XRF	1.41	4.86	4.31	4.85	1.79	0.44	4.54	2.15	2.32
P2O5	% XRF	0.16	0.16	0.17	0.13	0.39	0.36	0.17	0.10	0.87
Cr2O3	% XRF	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BaO	% XRF	0.02	0.07	0.13	0.07	0.06	0.03	0.07	0.13	0.11
SrO	% XRF	0.06	0.04	0.06	0.05	0.13	0.05	0.10	0.13	0.11
LOI	%	1.64	1.79	0.86	0.60	2.07	5.52	1.53	1.56	4.64
TOTAL	%	98.50	98.51	99.03	98.45	98.58	99.24	98.62	98.47	99.39
Rb	ppm	30	172	136	136	38	20	120	40	44
Sr	ppm	507	338	507	423	1100	423	846	1100	930
Ba	ppm	179	627	1165	627	537	269	627	1165	985
Nb	ppm	<10	10	10	10	<10	<10	10	<10	10
Zr	ppm	70	480	380	330	180	130	350	120	240
Y	ppm	22	30	30	24	20	22	28	10	24
Result of C.I.P.W normative mineral calculation										
Rock series	alkali	alkali	high-alkali tholeiite	alkali	alkali	alkali	high-alkali tholeiite	high-aluminum	tholeiitic	alkali
Tholeiite (TH)/Calc-alkali (CA)			TH				CA	CA	CA	
Type	type 1	type 5	type 5	type 1	type 1	type 1	type 5	type 5	type 5	type 1
Quartz %	--	11.68	14.61	13.65	0.14	--	15.10	21.12	27.16	2.35
Feldspar										
orthoclase %	8.33	28.71	25.46	28.65	10.57	2.60	26.82	12.70	21.44	13.71
albite %	33.75	40.86	42.04	40.52	35.10	43.31	32.23	45.68	31.64	29.69
anorthite %	22.31	3.93	6.64	7.39	23.18	13.89	10.96	9.37	8.35	21.54
Diopside										
ferrosilite %	3.48	--	--	0.08	1.43	--	0.21	--	--	0.66
enstatite %	2.48	--	--	0.03	1.22	--	0.11	--	--	0.47
wollastinite %	5.93	--	--	0.10	2.67	--	0.31	--	--	1.13
Hypersthene										
ferrosilite %	7.12	5.56	4.38	4.04	9.83	4.42	5.97	3.16	4.28	11.20
enstatite %	5.06	2.81	1.89	1.66	8.39	2.35	3.03	1.52	2.39	8.09
Olivine										
forsrerite %	1.99	--	--	--	--	6.10	--	--	--	--
fayalite %	3.09	--	--	--	--	12.62	--	--	--	--
Ilmenite %	1.88	1.31	1.20	0.99	2.09	3.69	1.35	0.63	0.72	2.81
apatite %	0.38	0.38	--	0.31	0.92	0.85	0.40	0.24	0.28	2.06
corundum %	--	0.96	--	--	--	2.39	--	1.99	--	--
Total of normative minerals (%)	95.80	96.20	96.22	97.42	95.54	92.22	96.49	96.41	96.26	93.71
Differential Index (D. I.)	42.08	81.25	82.12	82.82	45.82	45.91	74.15	79.50	80.24	45.75



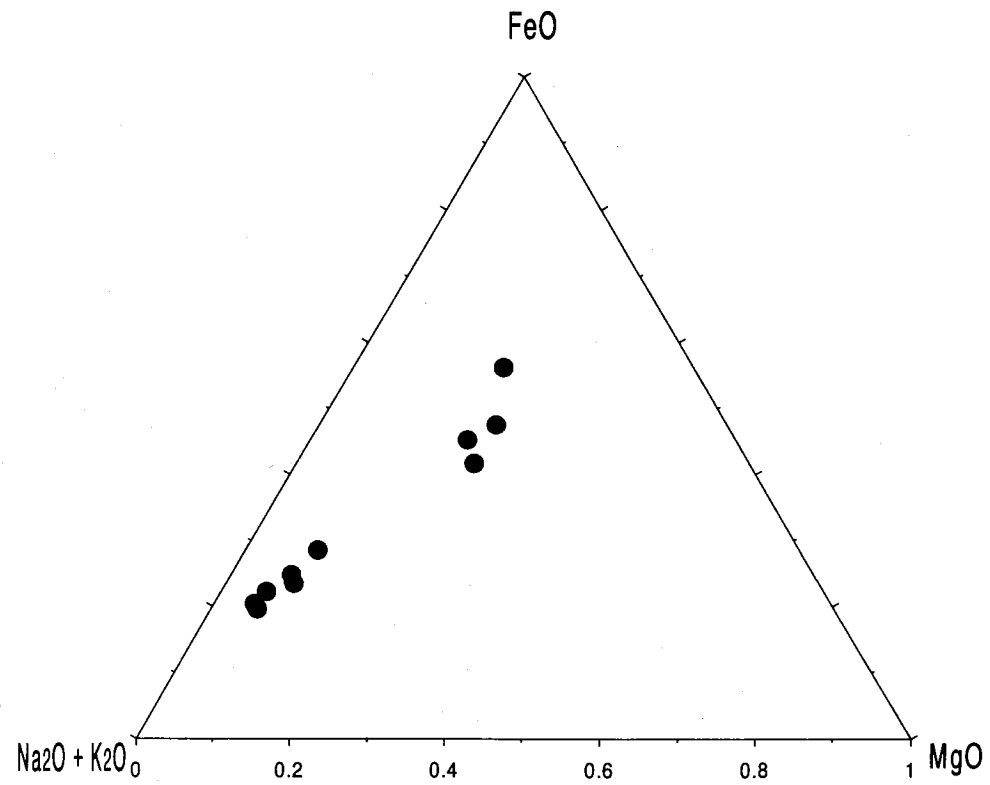


Variation diagram for the rocks of Selenge Granitic rocks and basalt

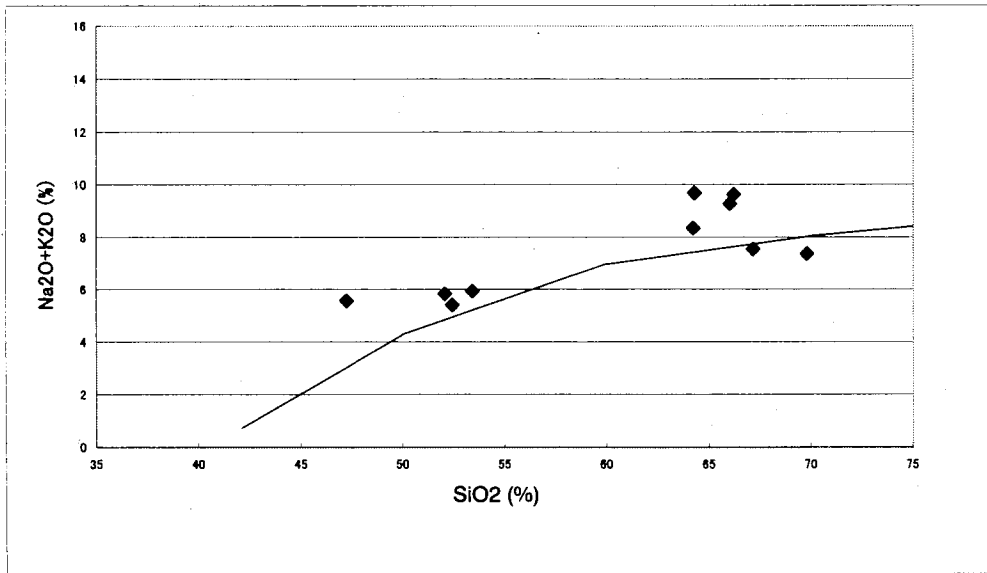
A-31



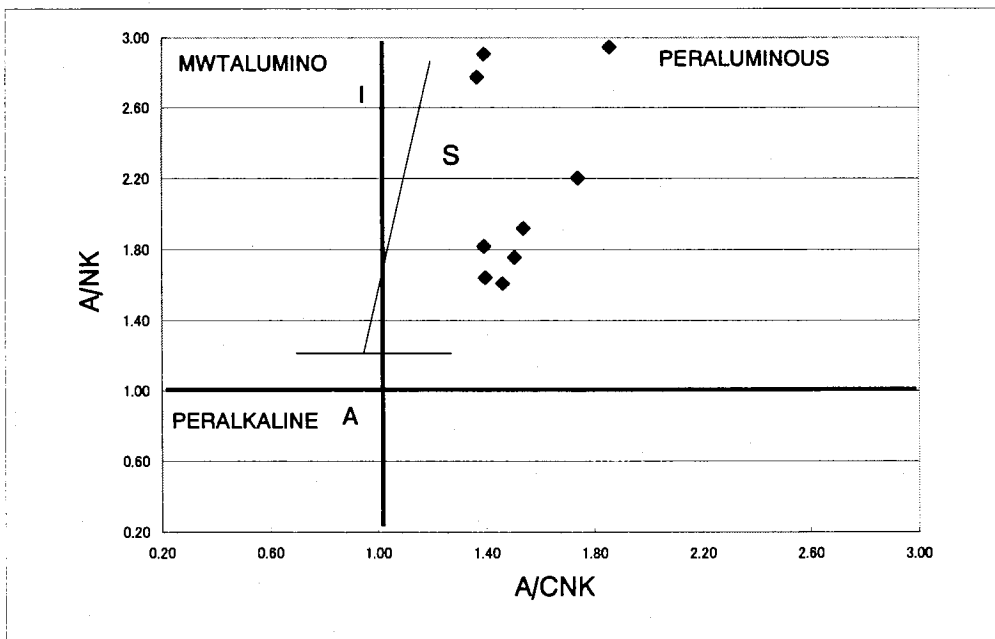
Q-Af-(Ab+An) diagram



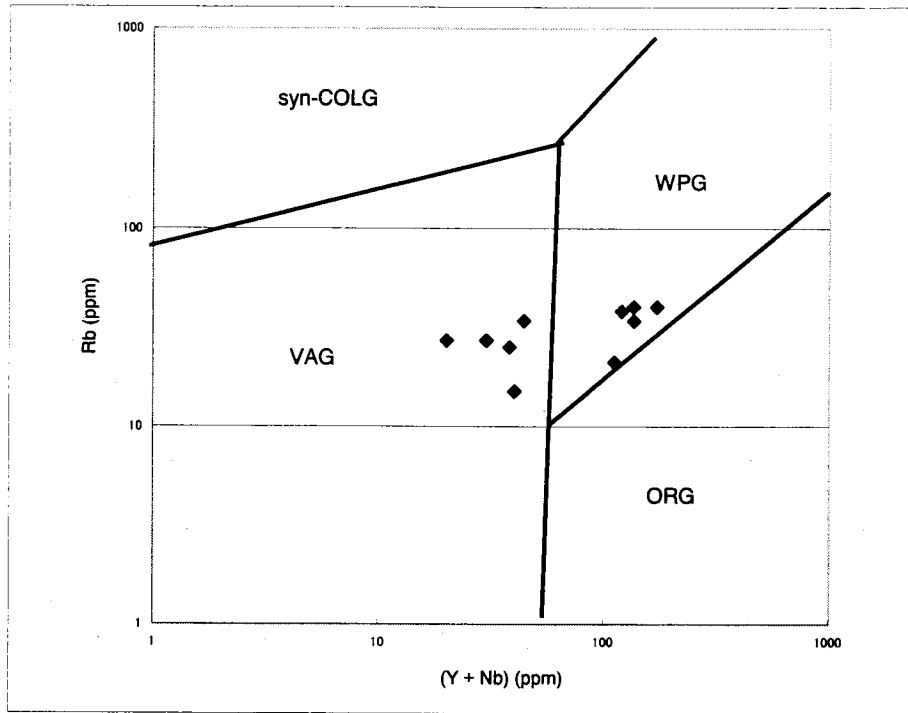
AMF diagram for the rocks of Selenge Granitic rocks and basalt



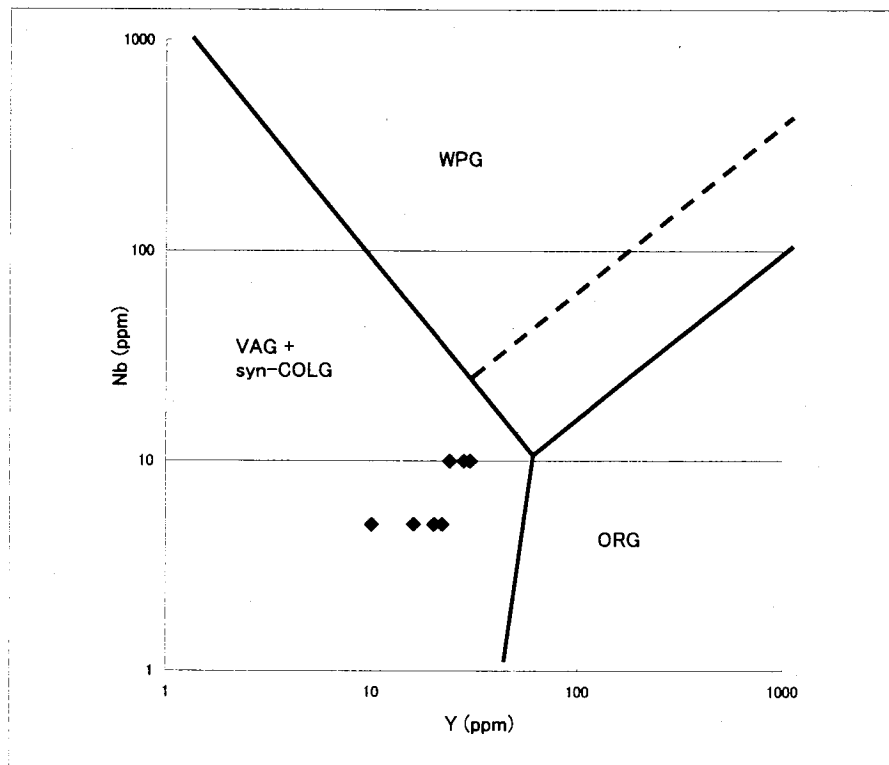
Alkali (Na<sub>2</sub>O+K<sub>2</sub>O)-silica (SiO<sub>2</sub>) diagram showing the composition of the major igneous rock type



A/NK-A/CNK diagram for the rocks of Selenge Granitic rocks and basalt



Rb-(Y+Nb) discrimination diagram for the rocks of Selenge Granitic rocks and basalt



Nb-Y discrimination diagram for the rocks of Selenge Granitic rocks and basalt

**Appendix 6 Ore grade assay results in the western Erdenet area**

Results of Ore analysis in the western Erdenet area, Mongolia.

Ser. No.	Sample No.	Location (Area)	Coordination		Description	Au (g/t)	Ag (ppm)	Al (%)	Ba (%)	Be (%)	Bi (%)	Ca (%)	Cd (%)	Co (%)	Cr (%)	Cu (%)	Fe (%)	K (%)	Mg (%)	Mn (%)	Mo (%)	Na (%)	Ni (%)	Pb (%)	Sr (%)	Ti (%)	V (%)	Zn (%)
			N	E																								
1	MA1058	Zuukhiin gol	49°13'03"	104°13'05"	silicified granodiorite with malachite along the fractures	<0.01	<5	7.99	0.08	0.002	<0.002	0.82	<0.001	0.002	0.060	0.464	2.38	2.3	0.78	0.067	<0.001	2.89	0.002	0.005	0.063	0.18	0.005	0.019
2	MA1065	Zuukhiin gol	49°13'15"	104°12'25"	silicified granodiorite with malachite spots	<0.01	<5	7.90	0.08	0.002	<0.002	1.56	<0.001	<0.001	0.039	0.213	2.52	2.0	0.80	0.033	<0.001	2.73	0.016	0.005	0.061	0.23	0.004	0.013
3	MC1079	Zuukhiin gol	49°13'05"	104°13'35"	weak altered, granodiorite with malachite along the fracture.	<0.01	<5	7.23	0.07	0.002	<0.002	0.78	<0.001	<0.001	0.017	0.423	1.81	1.9	0.78	0.025	0.001	1.94	0.002	0.007	0.050	0.19	0.005	0.012
4	MA1081	Mogoin gol	49°10'03"	103°45'29"	brown to white secondary quartzite with lm + hematite + goethite.	<0.01	<5	0.56	<0.01	<0.001	<0.002	0.05	<0.001	<0.001	0.019	0.002	1.48	0.1	<0.05	0.022	<0.001	0.05	0.002	0.001	0.024	0.05	0.001	<0.002
5	MB1071	Mogoin gol	49°11'17"	103°45'56"	ore mineral veins with specularite in silicified andesite. N28W, W:11mm	<0.01	<5	0.07	<0.01	<0.001	0.008	<0.05	<0.001	<0.001	0.052	0.001	20.34	<0.1	<0.05	<0.001	<0.001	<0.05	<0.001	0.003	<0.001	0.32	0.066	<0.002
6	MB1073	Mogoin gol	49°11'18"	103°45'54"	silicified rock with specularite.	<0.01	<5	8.18	0.07	<0.001	<0.002	0.08	<0.001	<0.001	0.023	0.001	2.25	0.2	<0.05	0.003	<0.001	0.24	<0.001	0.016	0.101	0.12	0.009	<0.002
7	MA1094a	Khujirjin gol	49°07'45"	103°39'03"	micro-quartz veins, network quartz veinlets in basalt	<0.01	<5	6.97	0.12	0.001	<0.002	1.36	<0.001	<0.001	0.017	0.005	4.04	1.9	1.73	0.078	<0.001	1.67	0.004	0.009	0.036	0.51	0.011	0.010
8	MA1094b	Khujirjin gol	49°07'45"	103°39'03"	micro-quartz veins, network quartz veinlets in basalt	<0.01	<5	7.27	0.11	0.001	<0.002	1.70	<0.001	0.002	0.015	0.004	4.32	1.6	1.79	0.076	<0.001	1.61	0.004	0.009	0.038	0.55	0.011	0.010
9	MA1098	Khujirjin gol	49°07'28"	103°40'32"	white argillized silicified granodiorite	<0.01	<5	3.90	0.03	<0.001	<0.002	0.06	<0.001	<0.001	0.019	0.001	0.75	1.8	0.10	0.007	0.005	0.31	<0.001	0.004	0.006	0.15	0.001	<0.002
10	MB1078	Khujirjin gol	49°06'44"	103°38'21"	quartz vein in andesite. N57W83N, W:7cm.	<0.01	<5	2.07	0.03	0.001	<0.002	0.30	<0.001	<0.001	0.033	0.001	1.44	1.0	0.07	0.011	<0.001	0.07	<0.001	0.004	0.004	0.08	0.002	<0.002
11	MB1081	Khujirjin gol	49°07'23"	103°38'13"	quartz vein in andesite. N51W78E, W:8cm.	<0.01	<5	4.09	0.03	0.001	<0.002	0.05	<0.001	<0.001	0.017	0.004	1.93	1.1	0.15	0.006	<0.001	0.14	<0.001	0.005	0.006	0.15	0.002	<0.002
12	MB1091a	Khujirjin gol	49°07'34"	103°34'22"	sphalerite veinlets in granite to syenite. N88E79N, W:1cm	<0.01	<5	6.80	0.09	0.002	<0.002	0.40	<0.001	0.001	0.021	0.004	3.11	2.7	0.43	0.132	<0.001	1.89	0.001	0.012	0.021	0.24	0.003	0.016
13	MB1091b	Khujirjin gol	49°07'34"	103°34'22"	sphalerite veinlets in granite or syenite. N88E79N, W:1cm.	<0.01	<5	6.50	0.09	0.002	<0.002	0.70	<0.001	<0.001	0.018	0.006	2.48	1.8	0.39	0.117	0.001	1.39	<0.001	0.037	0.022	0.25	0.003	0.015
14	MB1092a	Khujirjin gol	49°07'34"	103°34'22"	sphalerite quartz vein. N79E55N, W:4cm	<0.01	<5	4.29	0.07	0.002	<0.002	0.20	<0.001	<0.001	0.035	0.013	6.78	1.6	0.43	0.237	<0.001	0.83	0.001	0.036	0.013	0.14	0.003	0.028
15	MB1092b	Khujirjin gol	49°07'34"	103°34'22"	sphalerite-quartz veinlets in granite or syenite. N79E55N, W:4cm.	<0.01	<5	4.23	0.07	0.001	<0.002	0.24	<0.001	<0.001	0.034	0.008	5.15	1.4	0.34	0.169	<0.001	0.71	0.001	0.025	0.013	0.16	0.003	0.021
16	MB1094	Khujirjin gol	49°07'30"	103°34'28"	quartz vein in granite to syenite.	<0.01	5	0.27	<0.01	0.001	<0.002	0.45	<0.001	<0.001	0.026	0.004	0.43	<0.1	<0.05	0.011	<0.001	0.05	0.001	0.018	0.004	<0.05	<0.001	0.003
17	MB1095	Khujirjin gol	49°07'48"	103°35'32"	quartz vein with malachite in granite to syenite.	<0.01	39	1.94	0.02	0.001	<0.002	3.93	<0.001	<0.001	0.023	0.360	1.18	0.7	0.27	0.041	<0.001	0.58	0.002	0.478	0.015	0.10	0.002	0.060
18	MB1096a	Khujirjin gol	49°08'10"	103°35'06"	float stones of quartz vein with malachite in syenite to granite.	<0.01	111	1.96	0.01	<0.001	<0.002	0.20	0.004	0.003	0.032	11.131	4.17	0.5	0.33	0.065	0.269	0.05	0.001	1.006	0.003	0.07	0.004	0.857
19	MB1096b	Khujirjin gol	49°08'10"	103°35'06"	float stones of quartz vein with malachite in granite to syenite.	<0.01	60	4.47	0.10	0.001	<0.002	0.57	<0.001	0.001	0.026	2.496	4.58	2.0	0.58	0.126	0.093	0.31	0.001	0.519	0.021	0.24	0.006	0.184
20	MB1097	Khujirjin gol	49°08'08"	103°35'20"	quartz vein with malachite and azurite in granite to syenite. N63E86N.	<0.01	17	5.30	0.08	0.002	<0.002	1.49	<0.001	0.001	0.031	0.436	4.53	1.5	0.87	0.287	0.014	1.17	0.002	0.145	0.059	0.23	0.006	0.052
21	MB1099	Khujirjin gol	49°08'03"	103°35'28"	quartz vein with malachite in syenite. N52E43N.	0.02	75	0.44	<0.01	<0.001	<0.002	0.11	<0.001	<0.001	0.031	0.870	0.85	0.1	<0.05	0.017	<0.001	<0.05	<0.001	1.082	0.002	<0.05	0.001	0.078
22	MB1100	Khujirjin gol	49°07'59"	103°35'30"	quartz vein with malachite in syenite. N73E48N	<0.01	19	2.67	0.05	0.001	<0.002	0.48	<0.001	<0.001	0.049	0.332	4.57	1.0	0.50	0.118	0.026	0.34	0.002	0.207	0.015	0.10	0.005	0.072
23	MC1115②	Khujirjin gol	49°07'38"	103°37'21"	quartz vein.	<0.01	<5	0.82	<0.01	<0.001	<0.002	0.08	<0.001	<0.001	0.023	0.005	0.63	0.2	0.06	0.012	<0.001	0.05	0.001	0.017	0.002	<0.05	0.001	0.013
24	MC1116	Khujirjin gol	49°07'50"	103°37'18"	silicified syenite with quartz veinlets.	<0.01	<5	4.89	0.06	0.002	<0.002	0.65	<0.001	<0.001	0.022	0.008	1.93	2.3	0.46	0.048	<0.001	1.40	0.002	0.014	0.019	0.25	0.004	0.013
25	MC1117	Khujirjin gol	49°07'51"	103°37'18"	weak altered, granodiorite with malachite along the fracture.	0.03	221	1.76	0.03	0.001	<0.002	0.49	0.002	0.006	0.020	4.078	7.71	0.6	0.64	0.443	<0.001	0.07	0.003	5.575	0.011	0.09	0.004	2.644
26	MC1118	Khujirjin gol	49°07'52"	103°37'54"	stockwork in silicified, fine grained syenite with hematite	<0.01	<5	6.35	0.04	0.002	<0.002	0.10	<0.001	<0.001	0.014	0.003	1.40	3.3	0.12	0.014	<0.001	2.35	<0.001	0.007	0.006	0.17	0.002	0.006
27	MC1119②	Khujirjin gol	49°08'07"	103°38'18"	stockwork quartz vein in basalt.	<0.01	<5	7.11	0.06	0.001	<0.002	2.42	<0.001	0.003	0.027	0.005	5.22	2.6	4.01	0.284	<0.001	1.08	0.011	0.031	0.038	0.49	0.013	0.049
28	MC1120	Khujirjin gol	49°08'19"	103°38'39"	quartz vein in granodiorite with malachite and hematite.	<0.01	50	0.68	0.01	<0.001	<0.002	0.07	<0.001	<0.001	0.038	1.380	4.63	0.2	0.05	0.010	<0.001	<0.05	<0.001	0.041	0.001	<0.05	0.002	0.041
29	MC1129③	Khujirjin gol	49°08'52"	103°37'09"	float stone of quartz vein.	<0.01	<5	0.38	<0.01	<0.001	<0.002	0.05	<0.001	<0.001	0.023	0.001	0.46	0.1	0.07	0.012	<0.001	0.06	0.001	<0.001	0.001	<0.05	<0.001	<0.002
30	MC1133	Khujirjin gol	49°07'50"	103°37'18"	quartz vein and stockwork with hematite in syenite.	<0.01	<5	2.79	0.03	0.001	<0.002	0.53	<0.001	<0.001	0.024	0.005	1.37	1.0	0.40	0.058	<0.001	0.72	0.001	0.018	0.013	0.14	0.003	0.024

Results of Ore analysis in the western Erdenet area, Mongolia.

Ser. No.	Sample No.	Location (Area)	Coordination		Description	Au (g/t)	Ag (ppm)	Al (%)	Ba (%)	Be (%)	Bi (%)	Ca (%)	Cd (%)	Co (%)	Cr (%)	Cu (%)	Fe (%)	K (%)	Mg (%)	Mn (%)	Mo (%)	Na (%)	Ni (%)	Pb (%)	Sr (%)	Ti (%)	V (%)	Zn (%)
			N	E																								
31	MC1134	Khujirín gol	49°07'54"	103°37'18"	quartz vein and stockwork with malachite and hematite in syenite.	<0.01	16	6.05	0.04	0.002	<0.002	0.92	<0.001	0.001	0.019	0.198	3.31	1.7	1.09	0.176	<0.001	1.89	0.002	0.112	0.029	0.27	0.007	0.062
32	MC1135	Khujirín gol	49°07'57"	103°37'18"	brecciated syenite with quartz veinlets and stockwork with malachite and hematite.	<0.01	30	4.52	0.03	0.001	<0.002	1.92	<0.001	<0.001	0.018	0.303	2.00	1.2	0.95	0.124	<0.001	1.35	0.001	0.437	0.013	0.15	0.003	0.032
33	MC1136	Khujirín gol	49°07'58"	103°37'18"	brecciated syenite with quartz veinlets and stockwork with malachite.	<0.01	14	6.09	0.03	0.002	<0.002	1.11	<0.001	0.003	0.020	0.674	4.45	0.9	2.37	0.267	<0.001	1.79	0.003	0.090	0.018	0.19	0.005	0.119
34	MC1138(1)	Khujirín gol	49°08'18"	103°38'49"	quartz vein, N60E75N	<0.01	<5	3.83	0.03	<0.001	<0.002	1.12	<0.001	<0.001	0.021	0.006	1.86	0.7	0.69	0.046	<0.001	0.68	0.002	0.004	0.028	0.26	0.006	0.007
35	MA1118	Danbatseren	48°51'45"	103°47'13"	strongly silicified rock (secondary quartzite?)	<0.01	<5	0.13	<0.01	<0.001	<0.002	<0.05	<0.001	<0.001	0.042	0.004	4.36	<0.1	<0.05	0.008	<0.001	0.06	<0.001	0.003	0.005	0.12	0.003	0.003
36	MA1130	Undrakh	48°42'07"	102°45'49"	pink, fine grained, aplitic granite	<0.01	<5	1.23	<0.01	<0.001	<0.002	0.06	<0.001	<0.001	0.020	0.011	0.36	0.2	<0.05	0.010	<0.001	0.35	<0.001	0.002	0.003	<0.05	<0.001	0.002
37	MB1131	Tsookher mert	48°45'32"	103°15'42"	quartz vein with malachite in syenite. N73E48N	0.29	48	2.11	0.02	<0.001	0.004	1.17	0.002	<0.001	0.031	0.247	1.03	0.5	0.14	0.028	<0.001	0.25	<0.001	0.169	0.003	0.06	0.002	0.081
38	MB1132	Tsookher mert	48°45'28"	103°15'36"	quartz vein with malachite in syenite. N73E48N	0.02	<5	1.70	0.02	<0.001	<0.002	0.14	<0.001	<0.001	0.036	0.020	0.63	0.5	<0.05	0.013	<0.001	0.32	<0.001	0.041	0.002	<0.05	<0.001	0.005
39	MC1157(2)	Tsookher mert	48°45'38"	103°19'26"	weakly altered granodiorite.	<0.01	<5	2.77	<0.01	<0.001	<0.002	0.79	<0.001	<0.001	0.022	0.006	1.04	0.2	0.30	0.021	<0.001	0.78	0.002	0.005	0.025	0.10	0.002	0.004
40	MC1162	Tsookher mert	48°45'28"	103°16'02"	quartz veinlets in granite with malachite, azurite, hematite.	1.49	538	0.86	0.01	<0.001	<0.002	0.07	0.008	<0.001	0.030	0.116	0.49	0.2	0.05	0.014	<0.001	0.05	<0.001	2.088	0.002	<0.05	<0.001	0.682
41	MC1163	Tsookher mert	48°45'29"	103°16'01"	quartz vein with malachite, hematite, iron oxides.	0.23	365	0.95	0.01	<0.001	0.017	0.07	0.004	<0.001	0.038	0.123	0.53	0.2	0.06	0.007	0.001	<0.05	0.001	6.737	0.007	<0.05	<0.001	0.066

**Appendix 7 Results of chemical analysis for rock samples  
in the western Erdenet area**



Ser. No.	Sample No.	Location (Area)	Coordination		Geological Unit	Description	Au (ppb)	As (ppm)	Sb (ppm)	Hg (ppb)	Ag (ppm)	Al (%)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (%)	Cd (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	Fe (%)	K (%)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (%)	Ni (ppm)	P (ppm)	Pb (ppm)	Sr (ppm)	Ti (%)	V (ppm)	W (ppm)	Zn (ppm)
			N	E																														
1	MA1045	Zuukhiin gol	49°15'28"	104°14'25"	γ δ IP2-T1s	granodiorite with magnetite	4	5	7.9	91	<0.5	7.27	733	15.0	<2	1.36	<0.5	8	124	7	2.40	1.50	0.49	552	<1	2.09	5	685	57	247	0.23	29	<10	47
2	MA1050	Zuukhiin gol	49°15'44"	104°15'24"	γ δ IP2-T1s	diorite	<1	<1	9.4	80	<0.5	9.40	292	5.6	<2	5.91	<0.5	29	89	39	6.94	0.42	2.21	1,205	<1	2.13	8	1,282	64	592	0.70	208	<10	87
3	MA1052	Zuukhiin gol	49°15'28"	104°15'34"	P1hn1	basalt	<1	6	8.4	62	<0.5	7.37	458	8.9	<2	2.49	<0.5	20	80	10	6.31	0.83	1.54	1,620	<1	2.39	6	1,572	50	260	0.69	152	<10	111
4	MA1054	Zuukhiin gol	49°14'05"	104°12'22"	γ δ IP2-T1s	granodiorite with hornblende and biotite	<1	<1	5.6	44	<0.5	7.09	751	14.3	<2	1.37	<0.5	4	145	7	2.11	1.59	0.41	691	<1	2.16	7	504	57	220	0.20	20	<10	53
5	MA1055	Zuukhiin gol	49°15'03"	104°13'55"	γ δ IP2-T1s	granodiorite	<1	10	4.6	48	<0.5	6.85	908	15.8	<2	0.73	<0.5	3	225	11	1.79	1.68	0.15	404	<1	2.15	12	502	53	125	0.13	9	<10	46
6	MA1056	Zuukhiin gol	49°13'27"	104°13'23"	γ IP2-T1s	coarse grained granodiorite	<1	<1	10.4	87	<0.5	8.28	724	16.5	<2	3.02	<0.5	14	158	23	3.75	1.51	1.22	725	<1	2.05	15	1,553	59	615	0.35	82	<10	69
7	MA1058	Zuukhiin gol	49°13'03"	104°13'05"	γ IP2-T1s	silicified granodiorite with malachite along the fractures	1	4	<0.2	5.0	2.0	7.68	748	21.7	<2	0.73	1.7	28	157	11,740	2.23	1.33	0.80	1,604	2	1.77	21	1,117	60	582	0.17	45	12	405
8	MA1059	Zuukhiin gol	49°12'52"	104°12'54"	γ IP2-T1s	granodiorite in trench	3	3	12.4	71	<0.5	7.83	753	18.4	<2	1.90	<0.5	9	145	255	2.77	1.17	0.85	390	<1	1.70	18	835	64	591	0.27	53	<10	51
9	MA1061	Zuukhiin gol	49°13'07"	104°17'55"	γ IP2-T1s	granodiorite with malachite along the fractures	1	3	9.3	37	1.4	7.81	650	18.1	<2	0.42	2.1	8	134	4,709	2.42	1.39	0.93	482	<1	1.66	20	1,018	71	443	0.17	52	<10	336
10	MA1062	Zuukhiin gol	49°12'40"	104°12'29"	γ IP2-T1s	granodiorite	2	<1	10.9	35	<0.5	7.87	771	19.1	<2	1.89	<0.5	9	145	144	2.88	1.31	0.93	485	<1	1.69	15	952	80	566	0.32	55	<10	49
11	MA1064	Zuukhiin gol	49°13'15"	104°12'18"	γ IP2-T1s	granodiorite with hornblende and biotite	4	<1	8.3	33	<0.5	8.15	851	17.1	<2	1.98	<0.5	8	148	129	2.68	1.17	0.89	341	<1	1.75	16	1,024	60	821	0.27	53	<10	39
12	MA1068	Zuukhiin gol	49°13'25"	104°12'54"	γ IP2-T1s	granodiorite	<1	5	19.7	33	<0.5	7.90	655	18.8	<2	1.60	<0.5	10	134	274	2.48	1.30	0.85	492	<1	1.70	16	859	56	549	0.23	50	<10	57
13	MB1046	Zuukhiin gol	49°14'34"	104°12'28"	P1hn1	strongly silicified rock with andesite	1	3	7.2	20	<0.5	5.78	900	10.7	<2	0.89	<0.5	<1	133	4	1.03	1.84	0.14	422	<1	2.02	4	214	29	228	0.16	8	<10	37
14	MB1048	Zuukhiin gol	49°14'27"	104°12'59"	γ IP2-T1s	biotite granite	<1	<1	<0.2	27	<0.5	5.91	825	13.0	<2	0.40	<0.5	<1	131	29	1.58	2.24	0.08	310	<1	2.09	6	288	34	71	0.11	5	<10	47
15	MB1054	Zuukhiin gol	49°13'08"	104°15'29"	γ IP2-T1s	granite or syenite	<1	11	3.2	65	<0.5	6.33	639	9.1	<2	0.70	<0.5	2	136	16	1.36	2.62	0.24	179	<1	1.82	8	292	50	251	0.14	27	<10	49
16	MB1057	Zuukhiin gol	49°14'05"	104°15'50"	γ IP2-T1s	granite or syenite with epidote	<1	<1	10.5	27	<0.5	6.16	290	7.9	<2	2.45	<0.5	6	182	8	2.17	0.94	0.37	402	<1	1.95	9	642	39	776	0.26	69	<10	26
17	MB1058	Zuukhiin gol	49°13'47"	104°15'25"	dyke	andesite with chlorite	<1	<1	2.3	61	<0.5	8.42	878	9.5	2	3.27	1.1	23	141	44	5.29	1.17	2.64	859	<1	2.14	56	1,825	55	740	0.63	139	<10	92
18	MB1059	Zuukhiin gol	49°13'40"	104°15'30"	γ IP2-T1s	granite or syenite	<1	<1	11.8	89	<0.5	7.55	569	7.4	<2	2.83	<0.5	10	105	29	3.40	1.42	1.20	624	<1	1.91	11	782	48	519	0.36	100	<10	63
19	MB1060	Zuukhiin gol	49°14'05"	104°13'17"	γ IP2-T1s	granite or syenite with epidote	1	<1	12.0	25	<0.5	7.32	318	8.9	<2	2.28	<0.5	4	127	4	2.73	0.84	0.53	743	<1	2.47	4	664	73	386	0.22	48	<10	42
20	MB1061	Zuukhiin gol	49°14'00"	104°13'15"	dyke	andesite with malachite veinslets	1	<1	3.1	125	0.9	8.58	841	9.9	<2	1.67	<0.5	5	65	714	4.47	1.96	1.34	1,051	<1	2.39	4	2,029	117	505	0.27	49	<10	156
21	MB1062	Zuukhiin gol	49°13'45"	104°13'22"	γ IP2-T1s	fine grained granite	1	<1	19.1	78	<0.5	8.87	615	14.1	4	2.59	5.3	48	2,795	121	5.86	1.58	1.18	1,114	<1	2.42	1,371	1,225	126	687	0.33	96	<10	331
22	MB1063	Zuukhiin gol	49°13'48"	104°13'41"	γ IP2-T1s	granite	2	3	11.6	54	<0.5	8.28	657	7.6	<2	4.02	<0.5	11	102	37	2.84	1.69	0.58	511	<1	2.04	10	914	59	556	0.38	105	<10	38
23	MC1069	Zuukhiin gol	49°14'53"	104°12'03"	P1hn1	andesite porphyry weakly silicified with sericite	<1	14	5.0	55	<0.5	5.65	684	14.1	<2	0.68	<0.5	2	136	5	1.19	0.73	0.11	435	2	1.26	11	424	68	106	0.14	11	<10	36
24	MC1070	Zuukhiin gol	49°14'54"	104°12'00"	P1hn1	andesite porphyry weakly silicified with sericite and K-alteration	1	<1	4.8	13	<0.5	6.93	592	14.6	<2	3.24	0.5	5	94	<1	4.79	0.56	0.74	1,152	<1	1.09	6	2,209	68	438	0.57	54	<10	117
25	MC1074	Zuukhiin gol	49°15'24"	104°12'48"	δ IP2-T1s	Granodiorite	<1	<1	18.4	<10	<0.5	7.25	423	8.7	4	5.24	0.8	25	112	24	6.13	0.40	2.20	1,165	<1	1.10	12	796	69	397	0.43	187	<10	91
26	MC1075	Zuukhiin gol	49°15'09"	104°13'01"	δ IP2-T1s	weakly altered granodiorite	<1	<1	9.5	<10	<0.5	7.22	275	7.4	3	5.83	<0.5	22	147	48	5.88	0.32	2.33	1,172	<1	1.05	19	666	63	393	0.44	185	<10	87
27	MC1076	Zuukhiin gol	49°15'05"	104°13'18"	δ IP2-T1s	granodiorite porphyry weakly altered with chlorite and sericite	<1	<1	6.9	28	<0.5	6.42	783	12.9	<2	1.63	<0.5	<1	137	6	1.94	0.72	0.37	533	<1	1.26	6	590	59	211	0.17	21	<10	45
28	MC1077	Zuukhiin gol	49°14'59"	104°13'28"	δ IP2-T1s	granite porphyry weakly altered with epidote, chlorite, K-alteration	<1	3	9.2	70	<0.5	5.92	858	9.6	<2	1.68	<0.5	1	160	4	1.51	0.85	0.18	446	<1	1.14	7	405	48	164	0.10	9	<10	31
29	MC1078	Zuukhiin gol	49°13'22"	104°13'18"	γ IP2-T1s	granodiorite weakly altered	4	2	5.3	28	<0.5	6.72	558	19.8	<2	1.70	<0.5	5	128	253	2.54	0.76	0.81	327	<1	1.12	14	954	77	471	0.22	46	<10	48
30	MC1079	Zuukhiin gol	49°13'05"	104°13'35"	γ IP2-T1s	weak altered granodiorite with malachite along the fractures	4	<1	8.0	47	1.0	6.96	563	18.7	<2	0.83	0.6	3	105	1,874	1.66	0.88	0.86	219	<1	1.19	17	980	68	449	0.17	48	<10	74
31	MC1080	Zuukhiin gol	49°12'57"	104°13'58"	γ IP2-T1s	granite porphyry weakly altered with silicification, chlorite and sericite	2	<1	11.9	74	<0.5	6.74	204	12.9	<2	2.32	0.5	6	130	36	2.09	0.77	0.66	796	<1	0.78	13	951	155	139	0.17	39	<10	205
32	MC1081	Zuukhiin gol	49°12'42"	104°14'28"	γ IP2-T1s	granodiorite weakly altered with epidote and chlorite	7	25	12.9	158	<0.5	7.19	368	10.2	<2	1.76	<0.5	8	123	11	2.88	0.41	1.10	746	<1	1.54	14	1,088	81	417	0.33	87	<10	98
33	MC1082	Zuukhiin gol	49°12'29"	104°15'05"	γ IP2-T1s	granodiorite weakly altered with chlorite	<1	3	17.5	23	<0.5	7.09	570	8.9	2	3.10	0.5	12	95	36	3.83	0.64	1.33	759	<1	1.20	15	1,037	87	630	0.36	104	<10	75
34	MC1083	Zuukhiin gol	49°12'18"	104°15'25"	dyke	basalt dyke weakly altered with chlorite	<1	6	7.3	72	<0.5	7.79	1,138	13.3	2	4.07	0.5	14	82	35	5.23	0.58	1.72	765	<1	1.27	26	4,322	95	1,841	0.54	124	<10	112

Ser. No.	Sample No.	Location (Area)	Coordination		Geological Unit	Description	Au (ppb)	As (ppm)	Sb (ppm)	Hg (ppb)	Ag (ppm)	Al (%)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (%)	Cd (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	Fe (%)	K (%)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (%)	Ni (ppm)	P (ppm)	Pb (ppm)	Sr (ppm)	Ti (%)	V (ppm)	W (ppm)	Zn (ppm)
			N	E																														
41	MA1070	Mogoin gol	49°06'29"	103°45'34"	P1-2	basalt	<1	14	8.5	39	0.9	6.92	748	18.7	<2	0.81	<0.5	2	195	13	1.16	1.65	0.10	572	2	1.61	18	280	63	234	0.14	15	<10	40
42	MA1076	Mogoin gol	49°10'12"	103°46'31"	P1-2	basalt	<1	<1	10.1	77	<0.5	9.10	451	7.8	3	6.55	<0.5	31	199	54	6.84	0.47	2.50	1,708	<1	1.30	35	1,443	50	702	0.67	163	<10	112
43	MA1077	Mogoin gol	49°10'40"	103°46'12"	P1-2	andesite to basalt with plagioclase phenocryst	<1	3	0.9	42	1.2	7.15	843	18.1	<2	0.50	<0.5	1	197	5	1.28	1.55	0.10	302	<1	1.58	12	308	76	229	0.17	13	<10	52
44	MA1078	Mogoin gol	49°10'15"	103°46'00"	P1-2	basalt	<1	20	<0.2	33	<0.5	7.20	1,112	13.8	<2	0.22	<0.5	1	112	4	1.22	1.37	0.06	394	2	1.54	4	389	58	96	0.24	5	<10	43
45	MA1079	Mogoin gol	49°10'07"	103°45'44"	P1-2	altered rock with strong silicification and iron oxidation	<1	<1	<0.2	46	<0.5	2.11	53	<0.5	3	0.16	<0.5	<1	436	16	9.71	1.00	<0.01	58	<1	0.05	8	3,109	26	805	0.02	44	<10	13
46	MA1080	Mogoin gol	49°10'06"	103°45'42"	P1-2	strong altered rock with quartz network	1	4	<0.2	<10	0.5	4.68	70	1.3	<2	0.14	<0.5	<1	291	13	1.22	0.19	<0.01	189	2	0.10	19	2,760	51	258	0.07	54	<10	13
47	MA1081	Mogoin gol	49°10'03"	103°45'29"	P1-2	brown to white secondary quartzite with Im + hematite + goethite	<1	5	<0.2	35	<0.5	1.10	530	<0.5	<2	0.08	<0.5	1	347	11	1.99	0.16	0.01	40	2	0.05	8	889	19	384	0.04	21	<10	17
48	MA1082	Mogoin gol	49°10'15"	103°45'00"	P1-2	basalt with pyrite dissemination	4	10	13.0	38	<0.5	7.61	374	8.8	2	5.71	<0.5	46	142	31	6.03	0.52	2.40	1,549	<1	1.18	29	1,314	66	614	0.55	167	<10	125
49	MA1083	Mogoin gol	49°10'29"	103°44'36"	P1-2	basalt (fresh)	1	4	15.5	65	<0.5	7.74	1,048	14.2	<2	2.25	<0.5	11	187	16	3.95	0.76	0.91	1,279	<1	1.44	15	1,460	61	662	0.35	63	<10	88
50	MA1085	Mogoin gol	49°09'55"	103°45'32"	P1-2	altered rock	<1	4	<0.2	56	<0.5	0.96	151	1.0	<2	0.07	<0.5	<1	428	19	7.16	0.16	0.01	92	<1	0.05	13	1,261	25	108	0.03	30	<10	17
51	MB1064	Mogoin gol	49°12'19"	103°47'19"	γ δ T1s	granite or syenite	<1	<1	<0.2	67	<0.5	6.84	428	22.4	<2	0.28	<0.5	<1	86	7	1.99	2.92	0.16	97	<1	1.76	3	317	49	108	0.17	9	<10	25
52	MB1067	Mogoin gol	49°12'26"	103°45'19"	γ δ T1s	granite or syenite	1	<1	2.6	70	<0.5	7.44	531	23.1	<2	1.42	<0.5	4	108	32	2.71	2.63	0.52	491	<1	1.96	14	896	50	187	0.33	34	<10	53
53	MB1069	Mogoin gol	49°11'45"	103°46'10"	P1-2	andesite weakly silicified	<1	<1	2.8	57	<0.5	9.69	685	20.5	<2	2.36	<0.5	12	63	18	4.89	1.57	0.52	460	<1	2.23	12	1,276	59	568	0.52	126	<10	71
54	MB1070	Mogoin gol	49°11'28"	103°46'04"	δ T1s	porphyrite with chlorite and epidote	1	<1	3.7	67	<0.5	7.96	610	11.2	<2	1.68	<0.5	1	112	50	3.95	1.90	1.50	1,283	<1	1.91	10	1,079	52	368	0.48	86	<10	119
55	MB1073	Mogoin gol	49°11'18"	103°45'54"	P1-2	silicified rock with specularite	1	8	<0.2	326	<0.5	5.45	336	0.5	<2	0.06	<0.5	<1	247	5	1.61	0.20	<0.01	53	<1	0.30	7	1,393	208	1,752	0.09	79	<10	6
56	MB1074	Mogoin gol	49°11'22"	103°45'29"	P1-2	silicified rock with pyrite dissemination	1	3	<0.2	84	<0.5	0.22	136	0.6	<2	0.08	<0.5	3	308	23	2.66	0.08	<0.01	170	10	0.04	9	2,600	21	26	0.18	23	<10	23
57	MB1075	Mogoin gol	49°11'11"	103°45'14"	P1-2	andesite with plagioclase phenocryst	1	<1	4.6	136	<0.5	9.67	355	8.2	3	6.07	<0.5	17	71	4	5.89	0.94	1.81	1,181	<1	2.60	10	1,880	52	813	0.80	182	<10	76
58	MC1095	Mogoin gol	49°12'04"	103°46'39"	P1-2	basalt to andesite weakly altered with silicification	<1	13	4.8	45	<0.5	7.08	611	15.6	<2	1.74	<0.5	9	109	18	4.37	0.85	0.60	1,244	<1	1.15	5	1,614	98	323	0.50	39	<10	166
59	MC1096	Mogoin gol	49°11'55"	103°47'06"	P1-2	basalt to andesite weakly altered with chlorite	1	3	<0.2	62	<0.5	7.99	880	14.4	<2	1.98	<0.5	3	64	25	4.08	2.83	0.89	971	<1	1.82	4	1,411	55	475	0.50	42	<10	82
60	MC1098	Mogoin gol	49°12'27"	103°45'04"	δ T1s	diorite weakly altered	<1	8	7.8	73	<0.2	6.77	550	14.5	<2	2.65	<0.5	4	127	20	4.82	1.27	1.08	1,106	<1	1.57	10	1,468	65	302	0.55	77	<10	114
61	MC1100	Mogoin gol	49°12'06"	103°45'04"	P1-2	basalt to andesite weakly altered with chlorite	1	6	13.7	30	<0.5	8.43	959	16.1	<2	1.50	<0.5	3	74	8	3.29	2.19	0.54	739	<1	2.78	4	1,320	53	418	0.36	33	<10	52
62	MC1101	Mogoin gol	49°11'01"	103°45'12"	δ T1s	diorite weakly altered with quartz veinlets	<1	14	7.9	40	<0.5	3.16	116	7.0	<2	0.40	<0.5	3	149	28	1.06	0.87	0.27	118	<1	0.10	10	1,367	28	21	0.17	32	<10	18
63	MC1103	Mogoin gol	49°11'52"	103°45'13"	P1-2	brecciated andesite porphyry weakly altered	1	<1	3.0	69	<0.2	7.21	574	17.6	<2	0.94	<0.5	11	109	32	6.88	0.97	0.57	1,391	<1	0.54	10	1,567	61	195	0.49	61	<10	107
64	MC1109	Mogoin gol	49°11'18"	104°12'46"	P1-2	andesite moderately altered with sericite	<1	3	<0.2	62	<0.5	4.70	762	0.7	3	0.18	<0.5	<1	197	40	7.97	0.52	0.05	102	<1	0.23	4	1,290	35	484	0.35	127	<10	18
65	MC1110	Mogoin gol	49°15'24"	104°46'37"	γ δ T1s	granodiorite porphyry weakly altered with chlorite and K-alteration	<1	<1	7.8	21	<0.5	8.91	577	18.8	<2	1.23	<0.5	6	109	9	2.26	2.45	0.47	564	<1	1.91	9	535	52	202	0.28	28	<10	65
66	MC1111	Mogoin gol	49°11'28"	103°47'35"	γ δ T1s	granodiorite moderately altered with silicification and sericite	<1	5	0.5	38	<0.5	5.87	669	16.5	<2	0.26	<0.5	3	179	11	0.94	2.43	0.13	252	2	1.51	5	284	47	132	0.12	10	<10	26
67	MC1112	Mogoin gol	49°11'31"	103°47'24"	P1-2	basalt andesite strongly altered with silicification and sericite	<1	9	<0.2	53	<0.5	0.33	41	<0.5	<2	0.03	<0.5	1	470	17	1.50	0.09	<0.01	99	4	0.05	12	181	13	46	0.36	17	<10	6
68	MA1088	Khujirriin gol	49°07'11"	103°39'42"	T2-J1	andesite	1	<1	12.5	420	<0.2	8.13	532	8.7	2	4.14	<0.5	22	74	66	5.94	0.89	1.82	1,178	<1	2.21	13	1,900	63	713	0.65	141	<10	77
69	MA1089	Khujirriin gol	49°07'06"	103°39'18"	T2-J1	tuffbreccia	<1	5	8.7	137	<0.2	8.21	790	15.8	<2	1.20	<0.5	6	33	2	3.54	1.60	0.73	809	<1	2.33	5	1,434	60	365	0.54	60	<10	78
70	MA1090	Khujirriin gol	49°07'00"	103°39'58"	T2-J1	basalt weakly silicified with epidote vein	<1	15	11.2	154	<0.2	8.37	313	8.5	<2	3.66	<0.5	15	62	39	5.07	0.73	1.67	913	<1	2.08	14	1,193	52	633	0.57	144	<10	63
71	MA1091	Khujirriin gol	49°07'30"	103°39'46"	δ T1s	granodiorite with iron oxidation and weak chloritization	<1	<1	<0.2	56	<0.5	7.88	265	8.8	<2	0.54	<0.5	14	119	22	4.05	0.30	0.67	866	<1	2.19	17	1,746	62	333	0.25	87	<10	81
72	MA1092	Khujirriin gol	49°07'26"	103°38'30"	T2-J1	basalt with chlorite	<1	15	6.9	75	<0.2	7.84	668	14.8	2	2.01	<0.5	7	73	7	5.54	1.13	0.62	1,838	<1	2.61	6	2,633	58	475	0.73	61	<10	145
73	MA1093	Khujirriin gol	49°07'71"	103°38'56"	γ δ T1s	granodiorite with strong silicification	<1	3	11.4	43	1.4	2.17	82	5.9	<2	0.06	<0.5	2	264	17	1.09	0.31	0.07	118	140	0.05	12	295	252	24	0.07	34	<10	36
74	MA1095	Khujirriin gol	49°07'54"	103°39'28"	γ δ T1s	granodiorite fresh	<1	3	4.8	67	<0.2	7.33	558	39.0	<2	0.84	<0.5	8	121	33	2.76	2.20	0.63	512	<1	2.33	14	1,302	71	276	0.32	44	<10	54
75	MA1096	Khujirriin gol	49°07'46"	103°40'06"	γ δ T1s	granodiorite	<1	<1	0.6	27	<0.2	7.22	499</																					

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Ser. No.	Sample No.	Location (Area)	Coordination		Geological Unit	Description	Au (ppb)	As (ppm)	Sb (ppm)	Hg (ppb)	Ag (ppm)	Al (%)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (%)	Cd (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	Fe (%)	K (%)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (%)	Ni (ppm)	P (ppm)	Pb (ppm)	Sr (ppm)	Ti (%)	V (ppm)	W (ppm)	Zn (ppm)
			N	E																														
81	MA1103	Khujirrin gol	49°08'56"	103°34'53"	γ δ2T1s	medium grained granodiorite	<1	<1	11.0	25	<0.5	7.95	777	30.4	<2	2.97	<0.5	18	197	34	3.95	1.02	1.48	632	<1	1.45	42	1,583	92	660	0.50	86	<10	99
82	MA1104	Khujirrin gol	49°08'15"	103°34'08"	γ δ2T1s	medium grained granodiorite	<1	8	12.3	23	<0.5	7.04	582	42.3	<2	1.26	<0.5	5	152	19	2.79	1.04	0.52	567	<1	1.16	12	950	93	326	0.32	41	<10	74
83	MA 1105	Khujirrin gol	49°08'16"	103°34'48"	γ δ2T1s	Granodiorite	<1	9	4.8	14	<0.5	8.37	864	32.2	<2	1.17	<0.5	<1	155	21	2.25	3.10	0.47	671	<1	3.11	9	807	114	427	0.34	33	<10	92
84	MA1106	Khujirrin gol	49°08'17"	103°35'05"	γ δ2T1s	granodiorite, medium grained	321	3	6.8	90	18.4	7.10	786	25.8	16	1.84	0.6	6	157	25	2.90	2.97	0.96	515	<1	2.44	25	1105	71	517	0.40	66	<10	101
85	MA1107	Khujirrin gol	49°09'50"	103°39'13"	γ δ2T1s	granodiorite with iron oxidation	1	<1	4.4	73	0.8	6.56	706	12.3	<2	0.41	<0.5	4	156	20	2.12	1.49	0.57	453	<1	1.74	11	1,013	58	226	0.23	46	<10	41
86	MA1108	Khujirrin gol	49°10'09"	103°39'03"	P1-2	basalt strongly silicified	1	10	4.7	52	1.6	5.62	591	10.8	<2	0.23	0.5	<1	98	7	0.81	1.80	0.08	166	1	1.35	9	162	57	134	0.09	8	<10	42
87	MA1110	Khujirrin gol	49°11'12"	103°39'37"	P1-2	basalt with chlorite	<1	<1	2.1	60	<0.2	7.50	781	14.5	<2	4.49	<0.5	10	97	29	5.91	0.73	1.10	2,127	<1	1.68	6	2,482	54	563	0.87	100	<10	147
88	MA1111	Khujirrin gol	49°11'06"	103°40'18"	P1-2	basalt weakly altered with chlorite	103	<1	3.1	64	2.1	7.70	847	17.1	17	1.54	<0.5	<1	119	6	3.70	1.68	0.37	1533	<1	2.93	3	1186	58	444	0.22	5	<10	165
89	MA1112	Khujirrin gol	49°10'29"	103°41'10"	γ δ2T1s	fine grained granodiorite	1	13	6.3	58	0.5	6.54	451	15.2	<2	0.53	<0.5	2	82	18	1.93	1.50	0.11	355	<1	1.64	5	448	62	134	0.18	15	<10	44
90	MA1113	Khujirrin gol	49°10'23"	103°42'32"	γ δ2T1s	medium grained granodiorite	<1	<1	15.3	73	<0.2	7.28	606	15.6	<2	2.42	<0.5	9	132	8	3.10	1.14	0.98	524	<1	1.57	10	929	68	460	0.29	70	<10	54
91	MA1114	Khujirrin gol	49°08'21"	103°41'26"	T2-J1	basaltic tuff breccia to lapilli tuff	2	6	2.3	50	<0.2	6.96	979	13.1	24	2.06	<0.5	13	100	6	4.04	1.89	1.04	822	<1	2.34	41	1542	43	780	0.49	110	<10	95
92	MB1076	Khujirrin gol	49°06'16"	103°38'28"	T2-J1	basalt with magnetite and chalcocopy	<1	<1	5.3	62	<0.2	7.99	287	6.6	<2	4.73	<0.5	13	53	10	6.60	0.24	1.88	1,033	<1	1.59	2	1,496	59	567	0.68	175	<10	92
93	MB1077	Khujirrin gol	49°06'44"	103°38'21"	T2-J1	andesite weakly silicified with limonite	<1	61	4.2	73	<0.2	6.56	540	9.6	<2	0.19	<0.5	3	78	9	2.30	1.27	0.25	170	<1	1.62	2	746	51	142	0.23	29	<10	32
94	MB1079	Khujirrin gol	49°07'21"	103°38'35"	T2-J1	sphanitic basalt	1	<1	<0.2	54	<0.2	7.21	742	10.8	<2	0.47	<0.5	22	26	7	7.66	1.42	1.81	1,220	<1	0.11	4	1,553	57	38	0.81	81	<10	156
95	MB1080	Khujirrin gol	49°07'23"	103°38'33"	δ1T1s	granite porphyry	2	10	<0.2	89	<0.5	8.43	511	14.4	<2	0.19	<0.5	<1	64	6	3.39	1.99	0.60	166	<1	1.79	4	871	89	92	0.22	67	<10	42
96	MB1082	Khujirrin gol	49°07'26"	103°37'56"	T2-J1	basalt with magnetite	<1	4	5.2	89	<0.2	9.15	344	8.4	<2	5.81	0.7	24	96	66	6.90	0.32	1.57	1,355	<1	1.46	19	1,700	54	754	0.82	219	<10	90
97	MB 1083	Khujirrin gol	49°07'15"	103°37'53"	δ1T1s	Diorite	1	2	12.9	91	<0.5	8.88	613	15.1	3	4.68	<0.5	21	112	30	5.44	1.38	2.32	973	<1	2.72	32	1,922	60	958	0.51	147	<10	84
98	MB1084	Khujirrin gol	49°08'48"	103°37'40"	T2-J1	basalt	<1	<1	3.8	79	<0.2	7.27	331	7.6	<2	1.78	0.7	20	41	40	8.36	0.37	2.71	1,281	<1	1.68	8	1,399	49	307	0.85	238	<10	78
99	MB1085	Khujirrin gol	49°07'29"	103°36'54"	γ δ2T1s	granodiorite with hornblende	<1	<1	4.3	181	<0.5	8.36	898	19.8	2	2.61	<0.5	14	77	47	4.97	2.16	1.87	1,128	<1	2.79	27	2,002	62	747	0.51	120	<10	79
100	MB1086	Khujirrin gol	49°07'16"	103°35'58"	γ δ2T1s	granite or syenite with epidote and chlorite	<1	<1	2.8	114	<0.5	8.02	763	38.3	<2	0.33	<0.5	2	101	27	2.78	2.73	0.53	447	<1	2.26	12	1,065	73	132	0.20	43	<10	54
101	MB1087	Khujirrin gol	49°07'50"	103°36'44"	γ δ2T1s	coarse grained granite	<1	<1	14.3	82	<0.5	8.03	788	33.6	<2	1.85	<0.5	13	154	25	3.32	2.24	1.15	705	<1	2.46	28	1,225	83	559	0.35	67	<10	77
102	MB1088	Khujirrin gol	49°07'42"	103°36'05"	γ δ2T1s	granite or syenite with epidote and chlorite	<1	<1	7.8	149	<0.5	7.22	279	15.0	<2	0.18	<0.5	11	244	21	1.11	1.09	1.69	449	<1	2.84	75	661	67	33	0.04	32	<10	89
103	MB1089	Khujirrin gol	49°07'39"	103°35'42"	γ δ2T1s	granodiorite to syenitic granodiorite	33	6	<0.2	28	<0.2	6.38	458	36.0	3	0.61	<0.5	1	76	18	2.20	3.73	0.30	504	<1	2.33	8	913	61	210	0.34	33	<10	69
104	MB1090	Khujirrin gol	49°07'30"	103°34'33"	γ δ2T1s	silicified granite with quartz-malachite	21	241	113.7	97	27.8	2.88	254	14.0	<2	0.32	3.9	4	260	1,936	1.35	0.76	0.44	1,024	5	0.52	8	373	5,386	91	0.09	19	<10	561
105	MB 1093	Khujirrin gol	49°07'39"	103°34'05"	γ δ2T1s	Granitic syenite	1	2	7.1	80	<0.5	7.65	701	34.2	<2	1.31	<0.5	4	95	16	2.17	1.96	0.47	516	<1	2.02	15	778	87	358	0.28	34	<10	59
106	MB1100	Khujirrin gol	49°07'59"	103°35'30"	γ δ2T1s	quartz vein with malachite in syenite. N73E48N	<1	8	16.4	97	1.5	5.65	1,493	13.8	<2	1.01	0.8	12	262	870	3.71	1.79	0.93	1,966	13	0.77	26	999	632	396	0.23	57	18	985
107	MB1101	Khujirrin gol	49°07'54"	103°35'30"	γ δ2T1s	altered rock in trench	1	<1	5.4	62	1.2	3.93	513	10.0	3	2.29	0.9	6	224	183	5.95	0.91	0.81	2,166	<1	0.75	16	539	284	197	0.14	54	49	843
108	MC1113	Khujirrin gol	49°07'31"	103°37'08"	γ δ2T1s	syenite moderately altered with quartz veins	<1	17	1.1	70	0.6	7.01	479	13.8	<2	0.15	<0.5	5	112	20	1.72	2.99	0.43	377	<1	1.89	13	625	81	53	0.18	24	<10	80
109	MC1114	Khujirrin gol	49°07'37"	103°37'21"	γ δ2T1s	syenite weakly altered	<1	18	7.4	66	1.2	6.60	451	12.8	<2	0.32	<0.5	3	88	6	1.64	1.02	0.27	391	<1	2.10	6	678	88	91	0.23	21	<10	192
110	MC1115	Khujirrin gol	49°07'38"	103°37'21"	γ δ2T1s	syenite with quartz network	9	<1	4.7	45	0.9	3.72	496	10.7	<2	0.16	<0.5	4	202	90	1.37	2.25	0.47	1,010	8	0.39	10	394	386	62	0.09	23	<10	446
111	MC1117	Khujirrin gol	49°07'51"	103°37'18"	γ δ2T1s	weak altered granodiorite with malachite along the fractures	<1	4	<0.2	383	22.0	5.71	800	17.4	<2	0.53	2.5	9	189	4,897	3.29	2.31	0.86	1,995	8	1.42	23	890	5,258	176	0.26	45	38	5,664
112	MC1119K1	Khujirrin gol	49°06'07"	103°38'18"	γ δ2T1s	stockwork quartz vein in basalts.	<1	18	25.5	49	<0.5	8.17	208	18.9	<2	4.78	0.5	4	155	21	3.52	1.35	0.54	1,359	<1	2.13	14	817	134	1,845	0.34	68	<10	201
113	MC11212	Khujirrin gol	49°08'19"	103°38'39"	dyke	andesite weakly altered with chlorite and K-feldspar	<1	4	7.7	141	<0.2	7.38	1,374	16.7	<2	1.71	<0.5	11	122	194	4.11	1.83	1.29	2,808	<1	1.17	25	1,864	226	679	0.40	94	<10	427
114	MC1122	Khujirrin gol	49°08'55"	103°39'31"	P1-2	basalt weakly altered with chlorite and epidote	1	49	4.2	83	<0.2	7.33	857	9.7	<2	3.19	<0.5	13	113	23	6.31	0.74	0.61	569	<1	1.97	4	2,815	50	525	0.81	125	<10	18
115	MC1123	Khujirrin gol	49°09'11"	103°39'48"	γ δ2T1s	syenitic granodiorite	1	21	12.6	75	<0.2	7.36	1,059	18.9	<2	2.48	<0.5	14	133	4	3.54	1.19	1.33	763	<1	1.49	29	1,489	59	587	0.45	78	<10	72
116	MC1124	Khujirrin gol	49°06'30"	103°37'09"	δ1T1s	andesite moderately altered with silicification and sericite	2	8	3.9	17	0.9	7.31	22	30.9	<2	0.17	<0.5	4	89	15	1.63	0.19	0.07	93	2	4.98	8	237	36	73	0.16	17	<10	13
117	MC1125	Khujirrin gol	49°08'42"	103°36'42"	δ1T1s	andesite moderately altered with silicification and sericite	2	22	7.0	106	2.7	5.38	573	11.5	<2	0.21	<0.5	3	98	19	0.88	2.49	0.15	170	1	1.18	8	204	131	100	0.10	14	<10	99
118	MC1126	Khujirrin gol	49°08'57"	103°13'21"	γ δ2T1s	granodiorite to syenitic granodiorite weakly altered with chlorite and silicification	<1	3	11.3	<10	<0.5	8.08	1,032	19.7	<2	2.79	<0.5	4	64	17	2.16	2.00	1.39	462	<1	2.68	24	1,443	63	705	0.50	68	<10	44
119	MC1127	Khujirrin gol																																

Ser. No.	Sample No.	Location (Area)	Coordination		Geological Unit	Description	Au (ppb)	As (ppm)	Sb (ppm)	Hg (ppb)	Ag (ppm)	Al (%)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (%)	Cd (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	Fe (%)	K (%)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (%)	Ni (ppm)	P (ppm)	Pb (ppm)	Sr (ppm)	Ti (%)	V (ppm)	W (ppm)	Zn (ppm)
			N	E																														
121	MC11291	Khujiriri gol	49°06'52"	103°37'09"	$\gamma$ $\delta$ T1s	granodiorite weakly altered with chlorite	<1	14	16.7	37	<0.2	8.24	666	16.0	<2	3.79	<0.5	11	89	6	4.13	0.71	1.77	539	<1	2.12	28	1,785	67	952	0.53	95	<10	49
122	MC1130	Khujiriri gol	49°06'52"	103°37'35"	$\gamma$ $\delta$ T1s	syenite porphyry moderately altered	<1	13	15.9	145	<0.5	8.22	932	16.9	2	2.43	<0.5	5	73	7	3.83	1.97	1.37	453	<1	1.27	23	1,655	57	579	0.50	90	<10	56
123	MC1131	Khujiriri gol	49°09'11"	103°38'06"	P1-2	basalt weakly altered with chlorite	2	<1	8.3	31	<0.2	8.05	233	8.0	<2	6.11	1.1	28	107	80	7.66	0.34	2.57	1,473	<1	1.25	35	1,529	49	532	0.89	260	<10	95
124	MC1132	Khujiriri gol	49°06'59"	103°38'28"	$\gamma$ $\delta$ T1s	syenitegranodiorite weakly altered with silicification	<1	18	9.2	85	<0.5	7.78	1,086	18.9	<2	2.14	<0.5	5	111	15	3.19	2.03	1.45	552	<1	2.50	30	1,506	52	462	0.49	80	<10	49
125	MC1136	Khujiriri gol	49°07'57"	103°37'18"	$\gamma$ $\delta$ T1s	brecciated syenite with quartz veins and stockwork with melanochlrite	5	2	8.4	75	9.2	6.29	438	16.9	<2	1.49	1.9	13	175	5,072	3.07	1.69	1.52	1,877	<1	1.73	17	826	480	257	0.20	41	<10	841
126	MC1137	Khujiriri gol	49°08'15"	103°38'50"	$\gamma$ $\delta$ T1s	fine grained granodiorite	<1	<1	12.5	58	<0.5	8.88	540	14.0	2	3.78	0.8	18	80	24	4.46	1.02	1.75	798	<1	2.29	20	1,474	58	999	0.35	110	<10	81
127	MC11392	Khujiriri gol	49°08'18"	103°38'49"	$\gamma$ $\delta$ T1s	quartz vein, N80E75N	<1	10	9.0	85	<0.5	6.26	750	12.8	<2	1.03	<0.5	14	221	108	3.24	1.31	1.07	1,154	<1	1.67	25	1,336	51	354	0.29	76	<10	175
128	MA1024	Tsagaan Chuluut	49°04'15"	103°58'53"	T3-J1mg	basalt	2	15	<0.2	17	1.1	9.29	428	1.6	<2	0.10	<0.5	<1	65	208	1.47	0.12	0.01	19	6	0.14	4	1,434	73	1,807	0.49	62	<10	100
129	MA1025	Tsagaan Chuluut	49°04'47"	103°00'17"	T3-J1mg	andesite-basalt porphyry with plagioclase phenocryst	<1	<1	8.7	40	0.8	8.50	776	18.4	<2	2.47	<0.5	19	108	105	4.28	2.30	1.52	956	<1	3.09	26	1,529	54	916	0.55	108	<10	100
130	MA1028	Tsagaan Chuluut	49°03'21"	104°01'14"	T3-J1mg	granite with strong weathering	1	31	<0.2	71	<0.5	1.74	968	<0.5	<2	0.08	<0.5	<1	292	377	11.47	0.31	0.04	12	<1	0.06	4	1,290	52	244	0.06	186	<10	25
131	MA1029	Tsagaan Chuluut	49°03'40"	104°01'52"	T3-J1mg	andesitic basalt with moderate oxidation	2	<1	2.9	25	<0.5	8.40	1,005	15.0	<2	1.10	<0.5	21	147	36	4.84	1.49	0.92	716	<1	3.76	45	1,560	68	951	0.54	107	<10	99
132	MA1030	Tsagaan Chuluut	49°03'41"	104°02'18"	T3-J1mg	volcanic breccia with plagioclase phenocryst	<1	5	<0.2	75	<0.5	9.29	73	10.1	<2	0.28	<0.5	2	429	19	0.79	1.65	<0.01	78	3	1.07	9	3,071	60	1,471	0.48	128	<10	20
133	MA1031	Tsagaan Chuluut	49°03'40"	104°01'38"	T3-J1mg	altered rock with strong silicification	5	8	0.6	46	0.7	1.40	78	1.4	<2	0.04	<0.5	3	297	22	0.47	0.08	<0.01	124	12	0.04	15	406	35	175	0.08	10	<10	30
134	MA1032	Tsagaan Chuluut	49°03'41"	104°00'43"	T3-J1mg	altered rock, volcanic breccia with strong silicification	1	11	<0.2	62	1.0	0.57	582	1.6	<2	0.06	<0.5	<1	1,029	32	4.18	0.17	0.01	67	<1	0.04	13	1,788	4	135	0.06	48	<10	13
135	MA1033	Tsagaan Chuluut	49°02'43"	104°00'16"	T3-J1mg	andesite with strong silicification	<1	1	1.5	46	<0.5	8.28	859	12.3	<2	1.48	<0.5	13	158	38	4.09	1.86	1.57	698	<1	2.84	28	1,502	65	750	0.53	101	<10	104
136	MA1034	Tsagaan Chuluut	49°03'53"	104°00'05"	T3-J1mg	andesite porphyry with iron oxidation along the fractures	1	<1	9.8	27	<0.5	8.37	815	15.2	<2	3.06	<0.5	19	116	41	4.24	1.88	1.65	646	<1	2.45	38	1,538	70	800	0.58	106	<10	95
137	MA1035	Tsagaan Chuluut	49°03'53"	104°59'48"	T3-J1mg	altered volcanic rock	3	33	<0.2	66	<0.5	2.21	711	<0.5	<2	0.07	<0.5	<1	290	13	1.23	1.19	<0.01	100	4	0.10	13	800	42	503	0.93	36	<10	17
138	MA1036	Tsagaan Chuluut	49°03'43"	103°58'51"	T3-J1mg	basalt to andesite	5	<1	10.6	40	<0.5	8.21	909	10.9	<2	3.96	<0.5	31	201	46	8.22	1.22	2.55	659	<1	1.95	67	2,900	69	1,582	0.73	160	<10	114
139	MA1037	Tsagaan Chuluut	49°03'48"	103°59'10"	T3-J1mg	brecciated basalt with moderate silicification	2	15	<0.2	98	<0.5	7.56	65	1.4	<2	0.07	<0.5	<1	290	17	0.40	1.53	<0.01	181	4	0.34	28	1,019	71	474	0.42	197	<10	39
140	MA1039	Tsagaan Chuluut	49°03'41"	103°59'42"	T3-J1mg	andesite to basalt	<1	<1	1.1	64	<0.5	7.63	884	20.2	<2	0.86	<0.5	12	178	23	3.61	1.88	1.32	657	<1	2.27	29	1,393	64	486	0.40	78	<10	88
141	MA1041	Tsagaan Chuluut	49°03'18"	103°59'28"	T3-J1mg	altered rock in big alteration zone	3	16	1.8	46	1.1	7.02	84	1.6	<2	0.24	<0.5	2	155	7	0.42	1.08	<0.01	122	4	0.80	13	1,824	54	1,074	0.26	142	<10	24
142	MA1042	Tsagaan Chuluut	49°03'33"	103°59'03"	T3-J1mg	altered volcanic rock	9	<1	7.5	83	<0.5	7.24	748	8.7	<2	3.38	<0.5	21	224	45	5.14	1.09	2.21	1,315	<1	1.82	56	1,739	59	1,444	0.63	112	<10	93
143	MA1043	Tsagaan Chuluut	49°02'58"	103°59'45"	T3-J1mg	brecciated volcanic rock with iron oxidation	<1	7	<0.2	42	1.4	6.74	883	13.8	<2	0.22	<0.5	8	224	11	1.69	1.86	0.24	421	<1	1.59	29	541	72	139	0.18	20	<10	63
144	MB1028	Tsagaan Chuluut	49°04'27"	104°02'25"	$\gamma$ $\delta$ P2-T1s	granite with epidote and chlorite	<1	<1	<0.2	59	<0.5	8.47	553	15.7	<2	1.51	<0.5	10	93	<1	4.54	1.56	1.46	1,811	<1	2.74	16	1,222	61	347	0.48	89	<10	158
145	MB1028	Tsagaan Chuluut	49°04'47"	104°04'23"	$\gamma$ $\delta$ P2-T1s	andesite with strong silicification	<1	13	<0.2	23	0.5	6.58	97	8.8	<2	0.04	<0.5	<1	330	3	0.25	1.98	0.01	26	3	0.22	3	186	65	91	0.03	9	<10	7
146	MB1029	Tsagaan Chuluut	49°03'33"	104°03'00"	T3-J1mg	coarse tuff with silicification	<1	5	<0.2	41	<0.5	6.66	128	3.2	<2	0.20	<0.5	<1	433	8	1.37	1.10	<0.01	29	<1	0.50	7	2,485	47	1,323	0.59	112	<10	11
147	MB1030	Tsagaan Chuluut	49°03'34"	104°02'45"	T3-J1mg	strongly silicified rock with andesite	<1	13	<0.2	43	<0.5	0.47	131	<0.5	<2	0.04	<0.5	<1	565	6	2.84	0.16	<0.01	33	<1	0.07	7	77	7	31	0.25	21	<10	6
148	MB1031	Tsagaan Chuluut	49°03'34"	104°02'45"	T3-J1mg	strongly silicified rock with andesite	<1	5	<0.2	45	<0.5	8.08	74	9.9	<2	0.30	<0.5	<1	162	6	0.37	1.82	<0.01	23	2	0.92	4	1,545	60	727	0.19	80	<10	4
149	MB1033	Tsagaan Chuluut	49°04'17"	104°04'51"	$\gamma$ $\delta$ P2-T1s	spite with silicification	<1	7	<0.2	29	<0.5	7.43	840	16.3	<2	0.50	<0.5	<1	142	3	1.28	1.99	0.12	217	<1	3.55	5	403	44	138	0.19	5	<10	23
150	MB1034	Tsagaan Chuluut	49°04'17"	104°04'58"	$\delta$ IP2-T1s	granite	1	3	3.8	140	<0.5	7.40	692	13.1	<2	1.35	<0.5	4	189	15	2.48	2.19	0.55	591	<1	2.69	8	682	47	276	0.31	46	<10	62
151	MB1035	Tsagaan Chuluut	49°04'04"	104°03'58"	$\gamma$ $\delta$ P2-T1s	spite with epidotization	<1	11	<0.2	126	<0.5	6.53	98	1.7	<2	0.13	<0.5	<1	232	<1	0.48	1.54	<0.01	17	2	0.59	4	1,407	53	649	0.47	103	<10	7
152	MB1036	Tsagaan Chuluut	49°03'36"	104°03'28"	T3-J1mg	lapilli tuff silicified	1	5	<0.2	47	<0.5	2.85	478	<0.5	2	0.08	<0.5	<1	818	34	4.88	0.50	<0.01	75	<1	0.13	11	1,071	26	378	0.45	59	<10	11
153	MB1037	Tsagaan Chuluut	49°03'45"	104°03'11"	T3-J1mg	strongly silicified rock with andesite	2	<1	<0.2	52	<0.5	0.11	1,700	0.6	<2	0.09	<0.5	<1	853	<1	0.79	0.08	<0.01	40	<1	0.04	9	35	<2	8	0.68	3	<10	6
154	MB1038	Tsagaan Chuluut	49°03'58"	104°04'15"	$\gamma$ $\delta$ P2-T1s	syenite with biotite	1	<1	10.9	54	<0.5	7.78	840	11.9	<2	2.44	0.5	9	162	6	4.18	1.91	1.11	843	<1	2.46	9	1,022	42	465	0.49	92	<10	70
155	MC 1034	Tsagaan Chuluut	49°02'15"	104°04'09"	$\gamma$ $\delta$ P2-T1s	silicified granite porphyry with chlorite, epidote, sericite and pyrite dissemination	<1	16	0.7	54	0.7	7.36	73	3.1	<2	0.58	<0.5	<1	124	12	2.37	0.88	0.02	32	1	0.41	3	2,903	84	750	0.07	128	<10	7
156	MC 1035	Tsagaan Chuluut	49°02'21"	104°04'08"	$\gamma$ $\delta$ P2-T1s	silicified granite porphyry with chlorite, epidote, sericite and pyrite dissemination	<1	7	7.2	22	0.8	7.99	1,094	0.9	<2	0.04	<0.5	<1	117	10	0.23	0.10	<0.01	14	4	0.10	6	451	93	520	0.09	55	<10	5
157	MC 1036	Tsagaan Chuluut	49°02'29"	104°03'58"	$\gamma$ $\delta$ P2-T1s	brecciated granite porphyry with sericite and silicification	<1	1	<0.2	101	<0.5	6.58	404	6.5	<2	0.18	<0.5	1	146	38	4.35	0.32	0.04	51	4	0.18	6	1,437	70	744	0.35	92	<10	9
158	MC1037	Tsagaan Chuluut	49°02'33"	104°03'38"	$\gamma$ $\delta$ P2-T1s	granite porphyry with sericite and silicification	2	22	8.6	67																								

Ser. No.	Sample No.	Location (Area)	Coordination		Geological Unit	Description	Au (ppb)	As (ppm)	Sb (ppm)	Hg (ppb)	Ag (ppm)	Al (%)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (%)	Cd (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	Fe (%)	K (%)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (%)	Ni (ppm)	P (ppm)	Pb (ppm)	Sr (ppm)	Ti (%)	V (ppm)	W (ppm)	Zn (ppm)
			N	E																														
161	MC1041	Tsagaan Chuluut	49°02'16"	104°01'03"	T3-J1mg	andesite porphyry with chlorite and epidote	1	1	17.5	107	<0.5	7.61	562	14.9	2	2.80	<0.5	20	118	33	4.48	0.85	1.85	825	<1	1.47	31	2,129	86	615	0.52	109	<10	91
162	MC1042	Tsagaan Chuluut	49°02'22"	104°00'25"	$\gamma$ $\delta$ P2-T1s	granite with chlorite	<1	<1	10.6	58	<0.5	7.37	602	15.5	<2	1.98	<0.5	12	147	62	3.44	1.02	1.07	545	<1	1.31	17	1,096	68	527	0.33	76	<10	69
163	MC1044	Tsagaan Chuluut	49°02'31"	104°03'37"	T3-J1mg	basalt weakly altered	<1	<1	4.3	34	<0.5	8.16	1,143	14.4	2	2.50	0.8	11	115	18	4.86	1.14	1.47	716	<1	1.69	24	2,450	70	1,317	0.63	133	<10	93
164	MC1046	Tsagaan Chuluut	49°03'12"	104°01'39"	$\lambda$ $\pi$ T1-J1	granite porphyry with sericite and silicification	<1	19	7.6	26	1.4	6.82	75	0.8	<2	0.11	<0.5	<1	202	9	1.35	0.86	0.01	51	59	0.39	7	1,309	87	477	0.05	48	<10	4
165	MC1047	Tsagaan Chuluut	49°03'09"	104°01'56"	$\lambda$ $\pi$ T1-J1	granodiorite silicified and sericitized	1	13	7.1	58	0.6	9.22	60	1.3	<2	0.06	<0.5	<1	190	4	0.14	1.00	<0.01	39	8	0.51	5	669	190	535	0.03	36	<10	6
166	MC1048	Tsagaan Chuluut	49°02'50"	104°02'21"	$\lambda$ $\pi$ T1-J1	granite silicified and sericitized	<1	27	6.4	58	1.4	5.47	80	4.3	<2	0.06	<0.5	<1	190	5	0.93	0.68	0.01	67	8	0.30	9	549	80	190	0.07	13	<10	5
167	MC1049	Tsagaan Chuluut	49°02'52"	104°01'59"	T3-J1mg	basalt with chlorite and epidote	1	21	10.8	60	<0.5	7.59	560	13.2	2	2.48	<0.5	25	128	21	5.04	0.24	1.68	1,191	<1	1.86	33	1,337	59	590	0.45	117	<10	139
168	MC1050	Tsagaan Chuluut	49°02'53"	104°01'37"	$\lambda$ $\pi$ T1-J1	granite strongly silicified with sericite	1	11	1.2	<10	0.5	0.40	875	<0.5	<2	0.04	<0.5	1	268	15	0.51	0.10	<0.01	77	6	0.04	11	195	9	63	0.13	8	<10	7
169	MC1053	Tsagaan Chuluut	49°02'55"	104°00'20"	$\lambda$ $\pi$ T1-J1	mylonitic granite strongly silicified with sericite	<1	30	2.8	53	1.2	6.85	103	1.8	<2	0.08	<0.5	1	142	9	1.41	0.67	<0.01	34	4	0.32	6	1,389	128	698	0.05	29	<10	6
170	MC1056	Tsagaan Chuluut	49°03'12"	104°00'14"	T3-J1mg	fine grained granite moderately altered with silicification and sericite	1	8	4.9	49	<0.5	4.53	168	2.6	<2	0.12	<0.5	<1	189	4	0.48	0.47	0.01	47	3	0.28	5	1,134	47	478	0.15	72	<10	6
171	MC1057	Tsagaan Chuluut	49°03'13"	104°00'33"	T3-J1mg	andesite porphyritic tuff weakly altered	1	5	1.1	25	<0.5	7.25	655	17.0	<2	1.28	<0.5	12	197	21	3.37	1.04	1.06	623	<1	1.72	26	1,233	60	327	0.36	66	<10	80
172	MC1058	Tsagaan Chuluut	49°03'10"	104°00'49"	$\lambda$ $\pi$ T1-J1	fine grained granite moderately altered with silicification and sericite	<1	8	2.7	26	<0.5	0.38	49	2.6	<2	0.08	<0.5	<1	324	11	1.15	0.10	0.03	78	2	0.08	11	170	16	21	0.08	8	<10	12
173	MC1059	Tsagaan Chuluut	49°03'10"	104°01'02"	$\lambda$ $\pi$ T1-J1	fine grained granite moderately altered with silicification and sericite	<1	1	4.3	528	0.8	6.46	111	1.4	<2	0.07	<0.5	<1	208	4	0.36	0.73	<0.01	68	7	0.32	7	769	77	363	0.06	34	<10	4
174	MC1060	Tsagaan Chuluut	49°02'11"	104°01'14"	$\lambda$ $\pi$ T1-J1	syenitic diorite with chlorite, epidote and K-alteration	1	1	11.6	83	<0.5	7.39	562	13.8	<2	2.36	<0.5	10	147	46	3.10	0.86	1.01	617	<1	1.38	15	921	70	627	0.23	70	<10	59
175	MC1063	Tsagaan Chuluut	49°04'16"	104°00'59"	T3-J1mg	andesite porphyry weakly silicified with sericite	<1	14	<0.2	74	<0.5	6.37	89	2.9	<2	0.13	<0.5	<1	257	6	1.43	0.65	<0.01	168	5	0.30	19	1,800	77	798	0.23	107	<10	8
176	MC1064	Tsagaan Chuluut	49°04'22"	104°01'27"	T3-J1mg	andesitic basaltic tuff weakly silicified	<1	<1	13.6	36	<0.5	7.64	2,083	13.0	3	5.30	<0.5	22	97	12	5.80	0.97	2.49	778	<1	0.97	31	3,274	80	1,983	0.62	150	<10	101
177	MC1066	Tsagaan Chuluut	49°04'27"	104°02'30"	T3-J1mg	andesite porphyry weakly silicified with sericite	<1	10	0.4	21	<0.5	4.28	173	1.8	<2	0.08	<0.5	<1	367	5	0.77	0.43	0.01	127	<1	0.26	16	678	48	413	0.43	77	<10	11
178	MA1005	Erdenet Mine	48°59'16"	104°10'17"	$\lambda$ $\delta$ $\pi$ P2-T1s	granodiorite with silicification and iron oxide	10	16	15.9	170	5.2	8.22	893	12.3	<2	1.32	1.1	3	196	14,225	1.34	2.21	0.35	329	3	3.48	13	539	638	671	0.14	26	<10	140
179	MA1008	Erdenet Mine	48°59'28"	104°10'05"	$\gamma$ $\delta$ P2s	Granodiorite in iron oxidation zone	2	5	0.5	40	1.1	8.83	606	17.3	<2	0.79	<0.5	12	85	67,776	5.01	1.67	1.59	557	10	3.28	23	2,290	159	677	0.49	127	17	258
180	MA1012	Erdenet Mine	48°59'52"	104°09'33"	$\gamma$ $\delta$ P2s	Granodiorite	2	9	<0.2	50	1.9	6.96	751	12.6	<2	0.10	<0.5	<1	218	185	0.95	2.78	0.11	225	<1	2.66	14	290	126	155	0.13	11	<10	71
181	MA1014	Erdenet Mine	48°59'25"	104°09'56"	$\gamma$ $\delta$ P2s	Granodiorite with azurite and malachite	9	392	163.0	19	10.1	6.12	275	12.7	<2	0.29	<0.5	22	171	16,920	1.38	1.66	0.26	127	188	1.16	9	2,606	189	126	0.06	39	55	686
182	MB1004	Erdenet Mine	49°00'09"	104°09'01"	$\lambda$ $\delta$ $\pi$ P2-T1s	Float of granodiorite with biotite	<1	6	9.3	11	<0.5	8.11	888	12.5	<2	1.47	<0.5	1	127	2,728	2.12	1.50	0.49	362	<1	2.78	10	806	44	747	0.20	42	<10	70
183	MB1009	Erdenet Mine	48°57'49"	104°12'03"	$\lambda$ $\delta$ $\pi$ P2-T1s	leucocratic and pegmatitic granite	<1	3	3.4	50	<0.5	7.21	587	14.8	<2	0.59	<0.5	<1	138	169	0.96	2.11	0.07	49	1	2.18	3	210	42	432	0.14	20	<10	27
184	MB1010	Erdenet Mine	48°58'23"	104°12'28"	$\lambda$ $\delta$ $\pi$ P2-T1s	granitic aprite	<1	9	0.3	34	<0.5	6.73	875	18.3	<2	0.41	<0.5	<1	126	9	1.49	2.04	0.09	553	<1	2.44	4	398	46	131	0.14	7	<10	52
185	MB1011	Erdenet Mine	48°58'37"	104°12'28"	P1hn1	porphyritic andesite	1	8	<0.2	14	<0.5	7.28	812	21.8	<2	1.17	<0.5	<1	174	9	2.82	1.93	0.20	779	<1	2.66	6	900	55	209	0.45	15	<10	71
186	MC1012	Erdenet Mine	49°00'42"	104°08'13"	$\gamma$ $\delta$ P2s	granodiorite weakly altered with chlorite, epidote and K-alteration	32	7	15.9	65	7.7	5.10	693	11.5	<2	0.07	<0.5	5	192	608	1.80	1.23	0.29	142	101	0.09	14	427	58	34	0.14	79	<10	55
187	MC1014	Erdenet Mine	49°00'51"	104°09'02"	$\gamma$ $\delta$ P2s	granodiorite porphyry	<1	<1	12.8	89	<0.5	8.34	583	11.3	3	4.22	<0.5	17	113	123	4.70	0.55	1.73	832	<1	1.79	18	1,447	60	815	0.49	119	<10	80
188	MC1015	Erdenet Mine	48°58'21"	104°11'10"	$\gamma$ $\delta$ P2s	silicified granite porphyry with chlorite, epidote and pyrite dissemination	<1	17	25.9	164	<0.5	7.35	788	11.3	<2	1.77	<0.5	4	106	142	3.54	0.97	0.83	1,020	<1	1.54	15	753	142	493	0.26	64	14	110
189	MC1021	Erdenet Mine	48°53'07"	104°11'17"	$\lambda$ $\delta$ $\pi$ P2-T1s	silicified granite porphyry with chlorite, epidote and pyrite dissemination	<1	12	4.7	40	0.7	6.95	512	15.5	<2	0.45	<0.5	<1	96	40	1.05	1.31	0.09	88	1	1.37	7	238	64	306	0.20	27	<10	59
190	MC1027	Erdenet Mine	48°57'55"	104°11'39"	$\lambda$ $\delta$ $\pi$ P2-T1s	silicified granite porphyry with chlorite, epidote and pyrite dissemination	<1	8	11.4	33	0.7	7.87	861	8.3	<2	0.84	<0.5	<1	60	86	0.72	0.80	0.14	129	1	2.20	8	263	84	619	0.14	20	<10	23
191	MC1029	Erdenet Mine	48°57'50"	104°11'38"	$\lambda$ $\delta$ $\pi$ P2-T1s	silicified granite porphyry with chlorite, epidote and pyrite dissemination	<1	73	4.0	48	2.3	7.81	981	7.0	<2	0.06	<0.5	<1	79	47	1.98	1.43	0.37	82	9	0.15	4	351	66	55	0.10	52	<10	13
192	MA1116	Danbatsuren	48°52'16"	103°46'46"	$\delta$ T1s	granodiorite in trench	<1	<1	10.3	27	<0.5	8.13	748	15.5	<2	2.00	<0.5	8	136	43	3.30	2.24	1.19	561	<1	2.83	22	985	56	492	0.34	76	<10	76
193	MA1118	Danbatsuren	48°51'45"	103°47'13"	$\lambda$ J1	strongly silicified rock (secondary quartzite?)	1	19	<0.2	86	<0.5	0.14	47	<0.5	<2	0.04	<0.5	<1	360	39	3.77	0.10	<0.01	58	<1	0.06	8	246	27	36	0.11	31	<10	13
194	MA1119	Danbatsuren	48°51'54"	103°47'33"	$\gamma$ $\delta$ T1s	granodiorite	<1	<1	4.7	47	<0.5	8.33	851	15.2	2	2.12	<0.5	7	163	103	3.38	2.46	1.25	383	<1	2.97	23	1,051	50	553	0.35	77	<10	43
195	MB1103	Danbatsuren	48°53'03"	103°47'46"	$\alpha$ $\beta$ T2-J1	andesite with plagioclase phenocryst	<1	13	11.1	84	<0.5	7.81	829	16.5	<2	1.23	<0.5	9	153	20	3.09	1.27	0.42	603	<1	2.40	24	1,684	66	400	0.38	68	<10	58
196	MC1145	Danbatsuren	49°51'58"	103°48'15"	$\alpha$ $\lambda$ P1-2	andesite weakly silicified	<1	3	2.7	60	<0.5	6.91	73	7.6	<2	0.45	<0.5	1	170	13	1.20	0.17	0.15	641	<1	4.00	21	675	48	147	0.20	10	<10	48
197	MA1128	Undrakh	48°42'03"	102°45'45"	$\gamma$ $\delta$ IPZ1	granite with moderate silicification and weak iron oxidation	<1	1	1.0	36	0.5	7.75	975	12.2	<2	0.26	<0.5	2	293	189	0.31	2.46	0.04	43	3	1.17	6	387	44	129	0.03	3	<10	15
198	MA1131	Undrakh	48°41'44"	102°45'55"																														

Ser. No.	Sample No.	Location (Area)	Coordination		Geological Unit	Description	Au (ppb)	As (ppm)	Sb (ppm)	Hg (ppb)	Ag (ppm)	Al (%)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (%)	Cd (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	Fe (%)	K (%)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (%)	Ni (ppm)	P (ppm)	Pb (ppm)	Sr (ppm)	Ti (%)	V (ppm)	W (ppm)	Zn (ppm)
			N	E																														
201	MC1174	Undrakh	48°42'38"	102°47'02"	γ2D2	granite weakly silicified	<1	3	11.6	72	<0.2	6.54	673	12.3	<2	0.66	1.2	4	208	9	1.34	1.93	0.15	13,449	3	2.13	4	701	61	193	0.11	13	11	109
202	MC1175	Undrakh	48°42'31"	102°46'53"	γ2PZ1	granite weakly silicified	<1	9	2.3	55	0.5	8.32	2,448	11.6	<2	0.56	<0.5	<1	144	6	1.40	2.19	0.11	496	<1	2.73	4	553	83	197	0.16	5	<10	33
203	MA1120	Tsookher mert	48°48'13"	103°16'38"	γ ξ 3P2-T1s	granodiorite with volcanic rock xenolith	1	<1	4.6	23	<0.5	7.96	757	10.3	<2	2.06	<0.5	4	158	21	2.39	2.17	0.81	521	<1	2.46	17	1,108	49	432	0.22	54	<10	67
204	MA1125	Tsookher mert	48°48'47"	103°15'07"	γ ξ 3P2-T1s	granodiorite plagioclase phenocryst	1	34	6.1	32	<0.5	7.73	869	16.2	<2	1.80	<0.5	6	170	30	3.09	2.44	0.96	664	<1	2.43	19	1,022	52	428	0.29	64	<10	57
205	MA1126	Tsookher mert	48°48'06"	103°15'17"	γ ξ 3P2-T1s	granodiorite with hornblende	<1	<1	10.0	27	<0.5	7.94	808	14.7	<2	2.26	<0.5	6	206	11	3.09	2.32	0.86	642	<1	2.52	13	948	46	444	0.34	66	<10	47
206	MB1113	Tsookher mert	48°45'20"	103°15'24"	δ 1P2-T1s	syenite to granite with hornblende and biotite	<1	1	9.6	78	<0.5	6.78	817	10.8	<2	1.37	<0.5	6	152	6	1.89	1.39	0.59	472	1	1.41	14	525	60	310	0.17	36	<10	44
207	MB1115	Tsookher mert	48°45'31"	103°14'49"	γ ξ 3P2-T1s	syenite with epidote network	<1	2	5.1	87	0.8	5.79	617	13.8	<2	0.52	<0.5	2	109	11	1.12	1.57	0.21	312	<1	1.01	7	250	56	170	0.11	14	<10	37
208	MB 1117	Tsookher mert	48°46'22"	103°14'32"	γ ξ 3P2-T1s	syenite with biotite	<1	13	11.3	72	<0.5	7.94	723	13.5	<2	3.09	<0.5	10	104	26	4.37	0.99	1.28	612	<1	1.62	15	1,363	63	550	0.33	99	<10	64
209	MB 1120	Tsookher mert	48°45'47"	103°15'10"	γ 3P2-T1s	syenite with biotite	1	9	5.3	48	<0.5	6.84	830	13.4	<2	1.02	<0.5	2	94	5	1.52	1.37	0.34	257	<1	1.45	6	417	60	239	0.14	23	<10	29
210	MB 1122	Tsookher mert	48°45'48"	103°15'15"	γ 3P2-T1s	syenite with quartz veins	1	2	4.7	54	0.8	1.66	18	3.1	<2	0.19	<0.5	<1	149	6	0.58	0.14	0.01	142	<1	0.51	9	76	25	36	0.03	7	<10	13
211	MB 1125	Tsookher mert	48°45'53"	103°15'24"	γ 3P2-T1s	epite with silicification and sericitization	<1	<1	2.6	22	0.8	6.09	728	9.8	<2	0.12	<0.5	<1	83	3	0.80	1.40	0.17	192	2	0.72	4	148	167	82	0.14	19	<10	49
212	MB 1128	Tsookher mert	48°45'44"	103°15'52"	γ ξ 3P2-T1s	syenite with biotite	<1	<1	6.0	40	<0.5	6.09	584	12.6	<2	0.67	<0.5	2	210	3	1.16	1.23	0.29	213	<1	1.12	8	380	49	179	0.10	17	<10	37
213	MB 1130	Tsookher mert	48°45'32"	103°15'42"	γ ξ 3P2-T1s	granodiorite with biotite and hornblende	1	3	10.8	35	<0.5	6.78	738	10.8	<2	1.88	<0.5	8	190	13	2.30	0.99	0.86	485	<1	1.28	20	667	73	364	0.18	47	<10	138
214	MC1152	Tsookher mert	48°44'59"	103°17'51"	γ ξ 3P2-T1s	granodiorite weakly altered with chlorite, K-alteration and silicification	<1	<1	6.1	47	<0.5	7.33	596	9.6	<2	1.72	<0.5	8	115	4	2.15	1.42	0.59	363	<1	2.29	17	762	48	413	0.24	54	<10	28
215	MC1161	Tsookher mert	48°45'16"	103°16'13"	γ ξ 3P2-T1s	basalt moderately alteration with silicification	<1	6	4.9	72	<0.5	6.18	1,154	9.9	<2	0.80	<0.5	3	109	8	1.10	2.67	0.19	229	<1	1.18	8	264	40	274	0.10	16	<10	22
216	MC1164	Tsookher mert	48°45'01"	103°18'06"	γ 3P2-T1s	quartz vein with malachite, azurite, hematite, iron oxides	<1	6	13.1	64	<0.5	2.92	438	4.8	<2	0.09	0.6	1	173	9	0.54	1.12	0.04	392	1	0.57	21	82	24	41	0.04	7	<10	17
217	MC1166	Tsookher mert	48°45'14"	103°16'27"	γ 3P2-T1s	granite with weakly altered with epidote, chlorite, silicification and K-alteration	<1	<1	<0.2	64	<0.5	6.36	867	10.7	<2	0.27	<0.5	2	108	3	0.90	2.25	0.09	133	<1	1.46	4	193	43	140	0.11	10	<10	16