

APPENDIX 4

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Table A-12 Microscopic observation of thin sections

Phase II survey (Thin section)

Sampe No.	District	Occurrence	Rock type	Primary minerals																Secondary minerals					
				qz	pl	kf	bt	mu	ho	opx	cpx	ol	ga	sph	zr	ap	op	gl	to	qz	chl	seri	serp	tc	ep
M00IH150	Erdenet West	Zhuukhiin gol	Rhyolic tuff	△	○													◎							
M00IH156	Erdenet West	Tsagaan chuluut (Talbulag)	Hornblende dacite	◎					◎									○	○						
M00HH102	Tosontsengel	Khuurai sair	Biotite dacite	◎	◎	△	△										△	△							
M00HH104	Tosontsengel	Zost uul	Hornblende dacite	◎	◎	△			△									△							
M00HH109	Tosontsengel	Naranbulag	Biotite granodiorite porphyry	◎	◎	△	○		◎									△							
M00HH110	Tosontsengel	Occurrence 124-B-4,5	Hornblende gabbro		◎		△									△		△	△						
M00HH119	Tsagaan uul	Khunkh tsakhir	Biotite granodiorite porphyry	◎	○	◎	△																		
M00HH120	Tsagaan uul	Khunkh tsakhir	Thermally metamorphosed sandstone	◎				△																	
M00HH143	Erdenet West	Burged Khyr	Biotite granodiorite		◎	△	○											△							
M00HH168	Bulgan SW	Oyuut khonkhor	Metadacite	△	○																				
M00HH170	Tavt	Ereen No.1b ore body	Biotite hornblende granodiorite	◎	◎	○	○		○							△		△							
M00HH172	Tavt	Ereen No.42 ore body	Biotite granodiorite (altered rock)	○			○																		
M00HH178	Zelter	Occurrence 24	Hornblende dacite	◎	○				○								△	△	◎						
M00HH180	Erdenet West	Under	Thermally metamorphosed sandstone	◎														△		△			◎		
M00HH194	Erdenet West	Tsagaan chuluut (North)	Sandy mudstone																						
M00HH201	Erdenet West	Mogoin gol (South)	Thermally metamorphosed sandstone	◎				○																	
M00HH205	Erdenet West	Zhuukhiin gol	Biotite dacite		○		△																		
M00HH207	Erdenet West	Zhuukhiin gol	Biotite dacite	◎	△		△												◎						
M00HH209	Erdenet West	Zhuukhiin gol (North)	Acidic tuff		○		△		△																
M00HH210	Erdenet West	SAR139	Augite basalt	○	◎	◎					◎							○							
M00HH211	Erdenet West	Under (North)	Dacitic tuff		△																				
M00HH212	Erdenet West	Under (North)	Dacite	◎	○													△							

Table A-12 Microscopic observation of thin sections

Phase II survey (Thin section)

(4/4)

Sampe No.	District	Occurrence	Rock type	Primary minerals																Secondary minerals						
				qz	pl	kf	bt	mu	ho	opx	cpx	ol	ga	sph	zi	ap	op	gl	to	qz	chl	seri	serp	tc	ep	ca
M00TM106	Murun West	Tsagaan tolgoi	Biotite granite	⊙	⊙	⊙	○										○									
M00TM115	Erdenet West	Tsookher mert	Metamorphosed granite porphyry	⊙	⊙	⊙	⊙										○									
M00TM116	Erdenet West	Tsookher mert	Metamorphosed granite porphyry	⊙	⊙	⊙	⊙										○									
M00TM123	Bulgan SW	Oyuut khonkhor	Aphyric alkali basalt				○				○						△	○								
M00TM128	Tavt	Ereen No.42 ore body	Biotite bearing hornblende granodiorite	○	⊙	○	△		⊙						△		△	○								
M00TM129	Tavt	Ereen No.1 ore body	Aphyric quartz dolerite	○	⊙	△	△		○		⊙							○								
M00TM135	Zelter	Gatsuunkhan	Aphyric alkali basalt		⊙	⊙											⊙									
M00TM136	Erdenet West	Under	Tuff	△	△												△									
M00TM139	Erdenet West	Under	Augite andecite	⊙	⊙						○						△	⊙								
M00TM141	Erdenet West	Under	Hornblende biotite granite	⊙	⊙	⊙	○		○								○									
M00TM148	Erdenet West	Tsagaan chuluut East	Granodiorite porphyry	⊙	⊙	△	○										△									
M00TM165	Erdenet West	Zhuukhiin gol	Mylonatized biotite granite	⊙	⊙	⊙	○										△									
M00TM167	Erdenet West	Zhuukhiin gol West	Metamorphosed granite	⊙	⊙	⊙	○										△									
M00TM169	Erdenet West	SAR139	Biotite bearing hornblende porphyrite	⊙	⊙	△	○		⊙								△									
M00TM172	Erdenet West	Tsagaan chuluut (Chuluut)	Biotite granite porphyry	⊙	⊙	○																				

Legend; ⊙ abundant; ○ common; △ minor; * rare

Primary mineral

qz:quartz, pl:plagioclase, kf:k-feldspar, bt:biotite, mu:muscovite, ho:hornblende, opx:ortho pyroxene, cpx:clino pyroxene, ol:olivine, ga:garnet, sph:sphene, zi:zircon, ap:apatite, op:opaque minerals (mainly iron oxide), gl:glass, to:tourmaline

Secondary mineral

chl:chlorite, seri:sericite, serp:serpentine, tc:talc, ep:epidote, ca:carbonate mineral (mainly calcite)

Table A-13 Microscopic observation of polished thin sections

(1/4)

Phase I survey (thin sections and polished-thin sections)

No.	Sampe No.	Rock type	primary minerals														secondary minerals						Note (others)			
			qz	pl	kf	bt	mu	ho	opx	cpx	ol	ga	sph	zi	ap	op	gl	qz	chl	seri	serp	tc		ep	ca	
1	M99NK007R	Pyroxene skarn	⊙						⊙		△															Minute unknown mineral (○)
2	M99NK014R	Mylonized granitic rock	⊙	○	○	△		△							△			⊙	○							Iron oxide (○)
3	M99NK025R	Muscovite granite porphyry	⊙	○	⊙		△								△											Fresh
4	M99NK026R	Serpentinite													△				⊙							chromite (•), Iron oxide (○)
5	M99NK028R	Granite porphyry	⊙	⊙	⊙																					fine grained groundmass
6	M99NK029R	Mylonized muscovite granitic rock	⊙	⊙			△								△											
7	M99NK030R	Talc-carbonate-iron oxide rock													△						⊙			⊙		Hydro thermal alteration products
8	M99NK031R	Quartz-sericite carbonate rock													△			△	○					⊙		Hydro thermal alteration products
9	M99NK033R	Hornblende monzonite		⊙	○			○							△	○			△	△						
10	M99NK038R	Biotite hornblende quartz monzonite	⊙	⊙	○	△		○							△				△	△						
11	M99NK040R	Olivine alkali basalt		⊙						△					△	⊙										Lava flow
12	M99NK041R	olivine augite trachy andesite		⊙						△	△				△	⊙		△						△		Lava flow
13	M99NK042R	olivine augite hornblende trachy andesite		⊙			△		△	△					△	⊙		△								Hematite(△), clay minerals (△)
14	M99NK043R	Silicified rock	⊙			△	△								⊙			⊙								Granitic Rock?
15	M99NK047R	Hornblende bearing biotite granite	⊙	⊙	⊙	△		△							△				△	△						
16	M99NK048R	Biotite bearing quartz monzonite porphyry	⊙	⊙	⊙	△									△			○	○	○			○			
17	M99NK049R	Biotite bearing quartz monzonite porphyry	⊙	⊙	⊙	△									△			○	○	○			○			
18	M99NK050R	Biotite bearing hornblende quartz monzonite porphyry	⊙	○	⊙	△		△							△				○	△			△			
19	M99NK051R	Hornblende quartz gabbro	△	⊙	△	△		○							○			△	○	○			○			
20	M99NK052R	Aphyric alkali basalt		⊙	⊙	△			⊙						○											Lava, Fresh
21	M99NK054R	Hornblende quartz diorite	○	⊙	△		△								△			○	⊙				⊙			

Table A-13 Microscopic observation of polished thin sections

(2/4)

Phase I survey (thin sections and polished-thin sections)

No.	Sampe No.	Rock type	primary minerals														secondary minerals						Note (others)		
			qz	pl	kf	bt	mu	ho	opx	cpx	ol	ga	sph	zi	ap	op	gl	qz	chl	seri	serp	tc		ep	ca
22	M99NK058R	Plagioclase pyric basalt	△	⊙	⊙										○		△	⊙					○		
23	M99NK059R	Biotite quartz monzonite porphyry	⊙	⊙	⊙	○									○			△							
24	M99NK061R	Biotite hornblende granite porphyry	⊙	○	⊙	△					⊙				○			△							Fresh
25	M99NK063R	Biotite bearing hornblende quartz monzonite porphyry	⊙	⊙	⊙	△		○							○			○							
26	M99NK065R	Granophyre	⊙		⊙	△									△										Fresh
27	M99NK066R	Biotite quartz monzonite porphyry	⊙	⊙	⊙	○									○			○	○						
28	M99NK067R	Olivine bearing basalt		⊙							○				○	⊙	△	○						△	
29	M99NK069R	Granite porphyry	⊙	⊙	⊙	△									△			○					△		allanite (△)
30	M99NK070R	Quartzite	⊙																						Fresh, rutile (△), contact metamorphism
31	M99NK074R	Biotite rhyolite	⊙	⊙	⊙	△									△		⊙		⊙				△		smectite(⊙), Perfect alteration
32	M99NK075R	Aphyric rhyolite		⊙											○		⊙	○							clay minerals(⊙), strong silicification
33	M99NK076R	Biotite bearing granite porphyry	⊙	○	⊙	△									○			△	○						
34	M99NK078R	Biotite rhyolite	⊙	⊙		△									△			○	○	○					
35	M99NK079R	Conglomerate																							Silicified rock(⊙.32-4mm>), Quartz and Clay (0.1mm>)
36	M99NK080R	Biotite quartz monzonite porphyry	⊙	⊙	⊙	○									△			△	△						
37	M99NK083R	Aphyric basalt	△	⊙	○						⊙	△			⊙		○							⊙	Lava
38	M99NK084R	Carbonate rock	○												○									⊙	chromite bearing
39	M99HH008R	Biotite quartz monzonite	⊙	⊙	⊙	○									△			△	△						
40	M99HH009R	Quartz-sericite-iron ore-muscovite rock	⊙				△								△				⊙						alteration products
41	M99HH010R	Aphyric basalt	○	⊙	△						⊙				○			○	○						clay minerals(○)
42	M99HH011R	Biotite tonalite	⊙	⊙	△	○									△			⊙	⊙						

Table A-13 Microscopic observation of polished thin sections

(4/4)

Phase I survey (thin sections and polished-thin sections)

No.	Sampe No.	Rock type	primary minerals														secondary minerals						Note (others)					
			qz	pl	kf	bt	mu	ho	opx	cpx	ol	ga	sph	zi	ap	op	gl	qz	chl	seri	serp	tc		ep	ca			
64	M99RK036R	Biotite hornblende quartz monzonite	⊙	⊙	⊙			○							·	△												Fresh
65	M99RK038R	Hornblende biotite quartz monzonite	⊙	⊙	⊙	○		○								·	△			⊙	○				○	○		
66	M99RK040R	Biotite hornblende dacite	⊙	⊙	⊙	△		○									△	⊙									Fresh	
67	M99RK044R	Augite bearing biotite hornblende quartz gabbro	○	⊙		△		⊙		△						·	△			○	⊙			○				
68	M99RK056M	Biotite bearing quartz monzonite porphyry	⊙	⊙	⊙	△											△			△	△							
69	M99RK057M	Biotite quartz monzonite porphyry	⊙	⊙	⊙	○											△			○	○							
70	M99NK008M	Serpentinized dunite								△		(⊙)				·					⊙						Chromian spinel (·)	
71	M99NK055M	Aphyric basalt		⊙	⊙											·	△	⊙	⊙	⊙				⊙			Clay minerals (⊙), secondary biotite (△)	
72	M99MZ009R	Serpentinized harzburgite								⊙	△	⊙				·					⊙						Chromian spinel (·)	
73	M99MZ014R	Serpentinized harzburgite								(⊙)		(⊙)				·					⊙						Chromian spinel (·)	
74	M99MZ021R	Gabbro		⊙	○	○		△		⊙						·	△		⊙	⊙				△				
75	M99MZ057R	Biotite bearing hornblende tonalite porphyry	⊙	⊙	△	△		⊙									○			·							Fresh	
76	M99RK020M	Granite porphyry	△	△															⊙		⊙						Highly altered	
77	M99RK021M	Granite porphyry				△											○		⊙		⊙						Highly altered, Clay minerals (⊙)	
78	M99RK026M	Biotite quartz diorite	⊙	⊙	△	○										·	○		⊙	⊙				⊙				

Legend:

⊙, abundant; ○, common; △, minor; ·, rare

qz: quartz, pl: plagioclase, kf: k-feldspar, bt: biotite, mu: muscovite, ho: hornblende, ol: olivine, opx: ortho pyroxene, cpx: clino pyroxene, ga: garnet, sph: sphene, zi: zircon, ap: apatite, op: opaque minerals (mainly iron oxide)

chl: chlorite, seri: sericite, serp: serpentine, tc: talc, ep: epidote, ca: carbonate mineral (mainly calcite)

Table A-13 Microscopic Observation of polished-thin sections

Phase I survey (Polished section)

No.	Sampe No.	type	primary minerals			secondary minerals			Note (others)
			pyrite	chalcopyrite	magnetite	goethite	chalcocite	hematite	
1	M99NK027R	disseminate	.			△			
2	M99NK057R	disseminate and veinlet		△	.	.	.		skarn?
3	M99NK073R	disseminate		.	△			△	
4	M99MZ064M	disseminate		.		.			Minute unknown minerals (△, ○)

Legend; ◎,abundant; ○, common; △, minor; .rare

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Table A-13 Microscopic observation of polished-thin sections

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Phase II survey (Polished-thin section)

Sampe No.	District	Occurrence	Rock type	Primary minerals													Secondary minerals						Opaque mineral						Note (others)												
				qz	pl	kf	bt	mu	ho	opx	cpx	ol	ga	sph	zi	ap	gl	to	qz	chl	seri	serp	tc	ep	ca	py	cp	ga		mt	he	go	pyr								
M00NK159	Erdenet West	Mogoin gol South	Biotite bearing hornblende quartz	○	⊗	△	△		⊗						△																										
M00NK163	Erdenet West	Zhuukhiin gol	Biotite bearing dacite	⊗	○	⊗	△																																		
M00NK164	Erdenet West	Zhuukhiin gol	Metamorphosed quartz diorite porphyry	⊗	⊗	△			○																																
M00NK165	Erdenet West	Zhuukhiin gol	Hornblende andecite	⊗	⊗	○											⊗																								
M00IH116	Tsagaan uul	Khunkh tsakhir	Plagioclase muscovite ironore quartz rock	⊗	○				⊗						△																										
M00IH118	Tsagaan uul	Tsagaan uul	Hematite quartz rock	⊗																																					
M00IH119	Tsagaan uul	Tsagaan uul	Amphibole skarn	⊗					○																																
M00IH131	Erdenet West	Tsookher mert	Silicified rock																																						
M00IH140	Zelter	Occurrence 24	Plagioclase phyrice andesite																																						
M00HH122	Tsagaan uul	Tsagaan uul	Pyroxene skarn	⊗					○						○																										
M00HH123	Tsagaan uul	Tsagaan uul	Hematite quartz rock	⊗																																					
M00MZ103	Tariat	Solongtiin gol	Iron ore chlorite epidote sericite rock																																						
M00MZ130	Murun west	Ulaannuur	Biotite granite	⊗	○	⊗	○																																		
M00MZ136	Erdenet West	Burged khyr	Biotite bearing tonalite	⊗	⊗	△	△																																		
M00MZ180	Erdenet West	Khujiriin gol North	Hornblende dacite		○																																				
M00TM108	Murun West	Tsagaan tolgoi	Hematite quartz rock	⊗																																					
M00TM168	Erdenet West	SAR139	Plagioclase phyrice andesite	⊗	△																																				
M00TM170	Erdenet West	SAR139	Silicified rock		○																																				

Legend; ⊗ abundant; ○ common; △ minor; · rare

Primary mineral

Secondary mineral

chl:chlorite, seri:sericite, serp:serpentine, tc:talc, ep:epidote, ca:carbonate mineral (mainly calcite)

Opaque mineral

py:pyrite, cy:chalcopyrite, ga:galena, mt:magnetite, he:hematite, go:goethite, pyr:pyrrhotite

Table A-14 Powdery X-ray diffraction

(2/2)

Phase I survey

Sample name	Silicas			Silicates										Carbonates		Sulfides			Sulfates		Others			
	Quartz	Cristobalite	Tridymite	Plagioclase	Albite	K-feldspar	Hornblende	Biotite	Sericite	Pyrophyllite	Chlorite	Chlorite/Mont	Mont	Kaolin	Andalusite	Calcite	Dolomite	Pyrite	Galena	Sphalerite	Gypsum	Barite	Diaspore	
M99RK048R	22				25	4			1															
M99RK050R	32					11			1															
M99RK051R	13				7	12																		
M99RK059R	38								16															
M99RK060R	36				10				7															
M99RK061R	50				4				15															
M99RK065R	42				4				6															
M99RK069R	45								6				8											
M99RK070R	35					1				7														
M99RK071R	22											11												
M99RK073R	46								5														4	

Figure in column shows quartz index.

Table A-14 Powdery X-ray diffraction

Phase II survey

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Sample No.	Silicas			Silicates										Carbonates			Sulfides			Sulfates		Others			
	Quartz	Christobalite	Tridymite	Plagioclase	Albite	K-feldspar	Hornblende	Biotite	Sericite	Pyrophyllite	Chlorite	Chlorite/Montmorillonite	Montmorillonite	Kaolinite	Alunite	Andalusite	Calcite	Dolomite	Pyrite	Galena	Sphalerite	Gypsum	Barite	Diaspore	
M00TM116	28			21		7					< 1						< 1								
M00TM117				34		5			1						4										
M00TM119	40								7																
M00TM120	18				6				4																
M00TM140	43								7																
M00TM142	46								10																
M00TM143	58													1	15										
M00TM146	69													12	8										
M00TM149	57								1					4	8										
M00TM150	59														16										
M00TM151	11				31	5																			
M00TM152	21				25	3			1																
M00TM153	41								< 1					17											
M00TM154	34								3																
M00TM155	26													8	20				1						
M00TM156	22													4	19										
M00TM157	36													18					1						
M00TM158	34				4				1																
M00TM159	34					6																			
M00TM160	43								11																
M00TM167	81				4																				
M00TM170	49				16	3					2														
M00TM171	25				24	5																			

Figure in column shows quartz index.

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Table A-15 Geochemical grade assay results of rock samples

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Phase I survey

Sample	Region	Name of occurrence	Rock Name	Alteration	Mineralization	Au (g/t)	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)
M99NK001M	Zaamar	Sudal N177	quartz vein	---	limonite	2.650	309	2.0	30	20.4	0.28	30	<0.5	60	0.08	<0.5	8	12	344	15.05	0.09	0.03	165	12	0.06	5	240	344	9	0.01	18	30	18
M99NK002R	Zaamar	Sudal N177	granite	---	---	<0.005	<1	<0.2	<10	0.2	6.18	560	1.0	<2	0.08	<0.5	1	7	5	0.63	3.24	0.06	25	<1	2.42	<1	270	12	51	0.05	5	<10	6
M99NK003M	Zaamar	Sudal N177	quartz vein	---	---	<0.005	2	<0.2	<10	<0.2	0.81	40	<0.5	<2	0.03	<0.5	2	10	7	0.17	0.28	0.01	20	<1	0.31	<1	70	<2	7	<0.01	1	<10	<2
M99NK004M	Zaamar	Sudal N177	quartz vein	---	---	<0.005	4	<0.2	<10	<0.2	0.04	<10	<0.5	<2	<0.01	<0.5	<1	14	<1	0.02	0.03	<0.01	<5	<1	0.01	<1	<10	<2	6	<0.01	<1	<10	<2
M99NK005M	Zaamar	Sudal N177	quartz vein	---	---	<0.005	6	0.2	<10	<0.2	0.08	<10	<0.5	<2	0.52	<0.5	<1	15	2	0.14	0.02	0.05	85	1	0.01	1	10	<2	36	<0.01	1	<10	2
M99NK006R	Zaamar	Sudal N177	slate	pyrite dissemination	pyrite	<0.005	48	0.2	<10	<0.2	4.00	230	0.5	<2	9.52	<0.5	6	44	19	2.44	0.92	0.64	1610	1	1.42	11	600	28	341	0.17	46	<10	38
M99NK007R	Zaamar	Ulziit ovoo	andesite	pyroxene skarn	---	<0.005	17	0.2	10	<0.2	7.86	200	0.5	<2	11.9	<0.5	17	197	<1	3.15	1.21	3.04	1090	<1	1.22	180	790	26	249	0.88	173	<10	48
M99NK008M	Zaamar	Ulziit ovoo	slate	skarnization	magnetite, Po, chalcocopyrite	<0.005	<1	<0.2	100	0.2	2.33	20	<0.5	<2	0.14	<0.5	176	4	498	22.00	0.18	15.00	3830	<1	0.29	170	300	<2	4	0.06	38	<10	1305
M99NK009R	Bulgan SW	Oyuut khonkhor	silicified rock	silicification	---	<0.005	4	0.4	<10	<0.2	6.45	250	2.0	<2	0.07	<0.5	3	5	3	1.18	3.44	0.31	140	<1	1.26	3	50	10	64	0.06	4	<10	68
M99NK010R	Bulgan SW	Oyuut khonkhor	silicified rock	silicification	limonite	<0.005	30	0.6	40	0.8	7.24	660	1.5	<2	0.28	<0.5	3	25	79	4.33	1.72	0.52	75	1	2.50	5	1740	128	462	0.10	86	<10	40
M99NK011R	Bulgan SW	Oyuut khonkhor	silicified rock	silicification	fine pyrite	<0.005	64	0.4	10	<0.2	4.09	260	1.5	<2	0.11	<0.5	3	23	49	2.98	0.32	0.62	80	6	0.30	37	1090	28	186	0.10	59	<10	54
M99NK012R	Bulgan SW	Oyuut khonkhor	silicified rock	silicification	Cu oxides	<0.005	35	1.0	50	1.4	7.89	320	2.0	2	0.85	<0.5	5	23	459	3.53	1.75	0.61	85	5	2.35	10	4580	148	404	0.22	95	<10	84
M99NK013M	Bulgan SW	Oyuut khonkhor	hydrothermal breccia	silicification	fine pyrite	0.015	24	1.2	30	1.6	7.56	590	1.5	<2	0.11	2.5	11	11	94	7.36	2.93	0.60	115	2	0.35	18	1490	166	370	0.14	81	<10	416
M99NK014R	Uubulan	Holboo ovoo	andesite	pyroxene skarn	---	<0.005	11	0.2	<10	<0.2	8.59	1490	1.5	<2	5.97	<0.5	15	10	7	3.68	2.8	1.39	2510	<1	2.80	10	1540	48	1355	0.54	128	<10	168
M99NK015R	Uubulan	Mogoin gol	diorite	---	Cu, Mn oxides	0.085	1	0.2	60	16.2	7.65	40	4.5	10	5.97	1.5	20	2	952	5.54	0.26	0.86	10000	6	0.46	<1	340	1475	886	0.15	43	<10	1055
M99NK016R	Uubulan	Gua ulaan uul	breccia	silicification	---	0.010	73	2.2	<10	2.2	4.29	180	5.0	<2	0.28	<0.5	1	1	6	3.61	4.13	0.06	175	109	0.47	<1	360	64	100	0.25	5	<10	144
M99NK017R	Khujirt	Zost tolgoi	granite	silicification	quartz, sericite, limonite	<0.005	3	<0.2	<10	1.6	6.34	900	1.5	<2	0.06	<0.5	1	3	4	1.19	2.69	0.35	40	1	0.52	<1	30	<2	15	0.08	7	<10	6
M99NK018R	Khujirt	Zost tolgoi	andesite	argillization	---	<0.005	3	<0.2	<10	<0.2	6.90	40	<0.5	<2	6.07	<0.5	6	30	1	4.99	0.12	1.19	795	<1	1.59	10	780	<2	514	0.63	112	<10	24
M99NK019R	Khujirt	Zost tolgoi	granite	silicification	---	<0.005	10	<0.2	<10	0.6	6.38	850	1.5	<2	0.13	<0.5	<1	2	3	1.78	2.13	0.28	55	1	2.00	<1	260	6	94	0.15	3	<10	2
M99NK020M	Khujirt	Yargit	granite	oxide copper	malachite, azurite	<0.005	6	<0.2	10	6.2	6.14	860	2.0	<2	0.37	<0.5	5	3	4360	1.27	2.84	0.33	480	50	2.54	<1	390	14	199	0.13	22	<10	40

Table A-15 Geochemical grade assay results of rock samples

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Phase I survey

Sample	Region	Name of occurrence	Rock Name	Alteration	Mineralization	Au (g/t)	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)
M99NK021M	Murun South	Donhor bulag	quartz vein	---	---	<0.005	6	<0.2	<10	<0.2	0.27	30	<0.5	<2	<0.01	<0.5	<1	7	20	1.51	0.26	<0.01	20	1	0.04	<1	10	22	8	<0.01	<1	<10	16
M99NK022M	Murun South	Donhor bulag	quartz vein	---	---	<0.005	4	<0.2	<10	1.0	1.75	140	1.0	2	0.11	<0.5	3	12	6	2.94	0.97	0.02	1055	6	0.70	<1	500	702	55	0.05	3	<10	74
M99NK023R	Murun South	Donhor bulag	hydrothermal breccia	silicification	---	<0.005	3	<0.2	<10	<0.2	5.68	30	27.5	<2	0.05	<0.5	1	6	<1	2.83	2.5	0.08	345	<1	2.71	<1	140	26	23	0.21	<1	<10	148
M99NK024M	Altgana gol	Altgana gol	quartz vein	---	molybdenite?	<0.005	4	<0.2	<10	<0.2	0.05	<10	<0.5	<2	<0.01	<0.5	<1	7	<1	0.03	0.03	<0.01	5	1	0.03	<1	10	<2	<1	<0.01	<1	<10	2
M99NK027R	Khokhoo	20	andesite	---	sulfide(not identified)	<0.005	<1	<0.2	<10	0.2	7.44	1960	1.5	<2	4.95	<0.5	30	90	<1	5.20	1.66	2.58	990	1	2.67	76	4060	38	901	0.70	122	<10	130
M99NK030R	South Camp	25d	listwaenite	---	---	<0.005	1	<0.2	<10	0.2	0.24	10	<0.5	<2	0.07	<0.5	111	1420	<1	4.18	0.02	>15.00	610	<1	0.10	2240	50	<2	<1	<0.01	10	<10	18
M99NK031R	South Camp	25d	listwaenite	---	---	<0.005	5	<0.2	<10	<0.2	0.19	10	<0.5	<2	0.72	<0.5	72	892	6	3.34	0.01	>15.00	930	<1	0.09	1445	50	<2	51	<0.01	3	<10	10
M99NK032R	Erdenet	Mogoin gol	quartzite gravel	---	---	<0.005	3	<0.2	<10	0.2	0.10	10	<0.5	<2	0.2	<0.5	<1	20	8	0.08	0.01	0.08	80	1	0.04	9	20	<2	12	<0.01	3	<10	<2
M99NK034R	Erdenet	Mogoin gol	granite	quartz, sericite, limonite	---	<0.005	2	0.2	<10	0.2	6.91	490	<0.5	<2	0.05	<0.5	1	10	5	3.52	0.14	0.02	15	1	0.12	1	1160	26	669	0.07	34	<10	2
M99NK035R	Erdenet	Mogoin gol	granite	quartz, limonite	---	<0.005	<1	<0.2	<10	<0.2	0.09	20	<0.5	<2	<0.01	<0.5	<1	3	1	0.22	0.03	<0.01	<5	3	0.01	<1	10	<2	7	0.11	10	<10	<2
M99NK036R	Erdenet	Mogoin gol	granite	quartz, limonite	---	<0.005	4	<0.2	<10	<0.2	0.05	10	<0.5	<2	<0.01	<0.5	<1	4	<1	0.16	0.01	<0.01	<5	2	<0.01	<1	<10	<2	5	0.05	6	<10	<2
M99NK037R	Erdenet	Mogoin gol	granite	quartz, limonite	---	<0.005	3	<0.2	<10	<0.2	0.05	10	<0.5	<2	<0.01	<0.5	<1	5	<1	0.22	0.01	<0.01	<5	<1	0.01	<1	10	<2	6	0.08	7	<10	<2
M99NK043R	Erdenet	Tsagaan chuluut (Talbulag)	tuff breccia	silicification	---	<0.005	8	0.4	30	0.2	3.44	680	<0.5	<2	0.03	<0.5	<1	55	6	1.93	0.82	0.01	10	4	0.46	1	570	18	463	0.50	65	<10	<2
M99NK045R	Erdenet	Tsagaan chuluut (Talbulag)	silicified rock	silicification	---	<0.005	6	<0.2	<10	<0.2	0.33	190	0.5	<2	0.01	<0.5	<1	20	6	0.74	0.11	0.01	5	2	0.04	<1	150	<2	82	0.22	9	<10	<2
M99NK046R	Erdenet	Tsagaan chuluut (Talbulag)	silicified rock	silicification	---	<0.005	5	<0.2	<10	<0.2	6.75	730	1.0	<2	1.09	<0.5	<1	11	3	0.72	2.05	0.09	530	<1	3.42	<1	150	12	343	0.10	9	<10	34
M99NK048R	Erdenet	SAR138	granite	---	malachite	<0.005	<1	<0.2	<10	1.2	8.00	90	1.5	<2	1.48	<0.5	13	22	1560	1.95	0.35	0.86	590	<1	5.01	13	920	66	924	0.31	65	<10	170
M99NK053R	Erdenet	SAR139	quartz+epidote vein	epidote	---	<0.005	<1	0.4	<10	<0.2	7.71	30	0.5	<2	9.61	<0.5	6	27	8	5.60	0.09	0.65	1960	<1	0.23	5	780	14	1420	0.37	135	<10	28
M99NK056M	Erdenet	SAR139	ore	epidote, silicification	malachite, chalcopyrite, pyrite	0.110	5	0.2	<10	13.2	5.95	120	0.5	---	6.93	<0.5	18	26	20700	6.82	0.25	1.49	1825	<1	0.51	22	---	18	1540	0.26	157	<10	52
M99NK057M	Erdenet	SAR139	ore	epidote, silicification	malachite, chalcopyrite, pyrite, limonite	0.045	3	<0.2	<10	4.6	7.12	350	0.5	2	4.36	<0.5	15	13	8560	3.83	0.82	1.50	1065	3	2.36	17	1310	10	1190	0.41	114	<10	42
M99NK060R	Erdenet	Tourmaline	quartz+tourmaline vein	---	---	<0.005	3	0.2	<10	<0.2	7.02	1020	0.5	<2	0.13	<0.5	1	9	47	1.72	3.64	0.27	75	<1	1.82	1	260	28	108	0.07	32	<10	26

Table A-15 Geochemical grade assay results of rock samples

Phase I survey

Sample	Region	Name of occurrence	Rock Name	Alteration	Mineralization	Au (g/t)	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)
M99NK064R	Erdenei	SAR188	basalt	epidote, quartz	---	<0.005	3	0.2	<10	0.2	8.85	120	0.5	<2	5.02	<0.5	17	17	4	5.27	0.48	2.38	875	<1	3.71	13	680	6	713	0.65	214	<10	66
M99NK068R	Erdenei	Danbatseren	quartz+epidote vein	---	---	<0.005	<1	<0.2	<10	0.6	8.62	50	1.0	<2	6.67	<0.5	13	79	22	3.58	0.18	0.63	665	<1	2.60	28	1550	22	1990	0.47	186	<10	42
M99NK070R	Erdenei	Danbatseren	dacite	silicified	---	<0.005	16	<0.2	20	<0.2	0.10	30	<0.5	<2	0.03	<0.5	<1	11	23	0.66	0.01	0.01	5	3	0.03	<1	10	<2	9	0.11	4	<10	<2
M99NK071R	Erdenei	Danbatseren	quartz vein	quartz, tourmaline, limonite	---	<0.005	14	0.2	<10	1.2	2.16	210	<0.5	<2	0.05	<0.5	<1	17	27	1.14	0.24	0.19	15	3	0.16	<1	390	2	466	0.14	39	<10	6
M99NK075R	Bulgan West	Aguit	breccia	intense silicification	---	<0.005	1	0.2	<10	<0.2	6.06	880	1.5	<2	0.37	<0.5	3	14	4	0.71	2.96	0.15	225	1	2.54	2	120	16	150	0.09	8	<10	26
M99NK079R	Bulgan West	Ereen ikher	breccia	silicification	---	<0.005	7	<0.2	10	<0.2	5.74	460	2.5	<2	0.21	<0.5	<1	8	1	1.52	5.66	0.06	285	5	0.20	<1	400	12	64	0.24	33	<10	86
M99NK081R	Bulgan West	Aguit	quartz vein	---	pyrite	0.010	1	0.4	<10	4.2	0.62	210	<0.5	<2	0.15	<0.5	<1	15	37	0.83	0.26	0.03	1040	3	0.02	<1	320	486	81	0.05	6	<10	36
M99NK082R	Bulgan	SAR194	andesite	epidote, silicification	malachite	<0.005	<1	0.2	100	19.8	9.14	10	4.5	---	14.8	<0.5	12	128	25700	4.81	0.12	0.69	455	<1	0.30	41	---	44	125	0.49	231	<10	<2
M99NK084R	---	---	listwaenite	silicification, carbonatized	---	<0.005	2	<0.2	<10	<0.2	0.45	20	<0.5	<2	0.36	<0.5	80	1515	94	4.26	0.09	15.00	540	<1	0.18	1955	80	<2	4	<0.01	14	<10	14
M99HH003M	Altgana gol	Altgana gol	quartz	---	molybdenite	<0.005	<1	<0.2	<10	<0.2	6.30	270	2.0	<2	0.12	<0.5	<1	8	26	0.19	4.1	0.10	10	320	2.29	8	<10	12	36	0.05	4	<10	2
M99HH021R	Erdenei	Danbatseren	dacite ~ andesite	partly silicification	---	<0.005	30	0.2	<10	<0.2	7.09	1560	1.0	<2	0.16	<0.5	1	5	13	0.87	3.16	0.24	115	<1	3.83	3	220	14	214	0.10	13	<10	16
M99HH025R	Bulgan	Aguit	altered rock	quartz+sericite	---	<0.005	14	0.2	<10	9.0	7.44	870	1.5	<2	0.03	<0.5	<1	2	8	1.64	3.27	0.28	150	45	0.19	<1	100	98	67	0.31	44	<10	38
M99HH026R	Bulgan	Aguit	silicified rock	quartz, hematite, limonite	---	0.015	24	0.6	<10	7.4	7.03	820	2.5	<2	0.35	<0.5	2	3	30	2.45	3.21	0.30	410	2	0.23	<1	1600	48	58	0.30	26	<10	172
M99HH032R	Bulgan	Jasiin buuts	andesite	weakly silicified	---	<0.005	1	0.2	<10	<0.2	7.75	2180	1.5	<2	1.33	<0.5	4	1	<1	2.68	4.05	0.59	915	<1	2.95	<1	1080	12	412	0.49	44	<10	70
M99HH033R	Bulgan	Jasiin buuts	quartz vein	quartz (black streak)	---	<0.005	4	0.2	<10	<0.2	6.08	200	1.0	<2	0.24	<0.5	8	4	17	1.54	0.13	0.52	80	<1	3.32	<1	460	2	189	0.13	25	<10	14
M99HH034R	Bulgan	Jasiin buuts	dacite or dacitic tuff	quartz+sericite	---	<0.005	7	<0.2	<10	<0.2	7.82	1500	0.5	<2	0.06	<0.5	1	3	<1	0.98	2.61	0.20	135	<1	1.73	1	210	4	63	0.19	12	<10	14
M99HH035R	Bulgan	Jasiin buuts	altered rock (andesite?)	quartz+sericite	---	<0.005	<1	<0.2	<10	<0.2	7.17	1200	1.0	<2	0.01	<0.5	<1	<1	<1	0.45	3.2	0.27	130	<1	0.22	<1	40	<2	11	0.28	27	<10	10
M99HH036R	Bulgan	SAR221	quartz vein	quartz+hematite along fracture	---	<0.005	1	<0.2	<10	0.2	5.06	110	0.5	<2	2.59	<0.5	12	76	79	2.29	0.5	0.97	255	<1	2.63	41	980	4	204	0.33	110	<10	32
M99MZ001R	Uubulan	Sairiin hundii	dacite	silicification	limonite	<0.005	4	<0.2	<10	<0.2	8.00	1140	2.5	<2	0.22	<0.5	1	3	4	1.35	3.48	0.10	220	<1	3.92	<1	1750	26	190	0.23	15	<10	58
M99MZ002R	Uubulan	Gua ulaan uul	silicified rock	silicification	limonite	<0.005	6	<0.2	<10	<0.2	6.69	110	5.5	<2	0.07	<0.5	2	<1	3	3.58	3.86	0.05	1475	<1	2.83	<1	140	34	43	0.26	4	<10	216

Table A-15 Geochemical grade assay results of rock samples

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Phase I survey

Sample	Region	Name of occurrence	Rock Name	Alteration	Mineralization	Au (g/t)	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)
M99MZ003R	Uubulan	Gua ulaan uul	dacite	silicification	Fe-Mn oxides	<0.005	5	<0.2	10	<0.2	6.03	380	5.5	<2	0.13	<0.5	4	13	3	3.85	3.41	0.03	1220	<1	2.12	2	540	58	49	0.27	10	<10	252
M99MZ004R	Khujirt	Zast toigoi	silicified, breccia	silicification	limonite	<0.005	4	<0.2	<10	0.6	5.88	800	0.5	<2	0.01	<0.5	2	2	34	4.89	2.66	0.17	50	1	0.15	<1	260	2	12	0.08	13	<10	28
M99MZ005R	Khujirt	Zast toigoi	granite	---	---	<0.005	1	<0.2	<10	<0.2	6.38	290	0.5	<2	2.33	<0.5	1	4	<1	0.59	0.55	0.11	265	<1	3.80	<1	240	<2	246	0.18	12	<10	20
M99MZ006R	Murun South	Donhor bulag	silicified rock	silicification	pyrite dissemination	<0.005	14	<0.2	<10	<0.2	6.72	200	4.0	<2	0.03	<0.5	<1	3	13	1.96	3.3	0.12	160	15	2.17	<1	70	12	53	0.19	3	<10	40
M99MZ007R	Murun South	Donhor bulag	silicified rock	silicification	---	<0.005	9	0.2	<10	<0.2	5.61	180	1.5	<2	0.01	<0.5	<1	2	<1	0.57	1.79	0.02	15	<1	3.57	<1	130	18	64	0.06	5	<10	4
M99MZ008M	Altgana gol	Altgana gol	quartz veins	---	molybdenite	<0.005	<1	<0.2	<10	<0.2	0.05	<10	<0.5	<2	0.03	<0.5	<1	18	<1	0.08	0.03	<0.01	5	12	0.03	<1	60	<2	5	<0.01	<1	<10	2
M99MZ009R	Altgana gol NW	Delger uul	ultra mafic rock	---	---	<0.005	4	<0.2	<10	<0.2	0.59	10	<0.5	<2	0.79	<0.5	100	1395	<1	5.04	0.08	15.00	800	<1	0.19	1985	60	<2	4	<0.01	20	<10	28
M99MZ010R	Khokhoo	Hurilt gol	granite	---	---	<0.005	4	<0.2	<10	<0.2	6.93	1030	1.5	<2	0.67	<0.5	1	9	<1	0.73	3.78	0.20	100	<1	2.52	10	90	28	264	0.07	7	<10	14
M99MZ011M	Khokhoo	20d	Cu ore	---	malachite, chalcopyrite	0.605	<1	2.0	30	44.2	1.99	380	<0.5	<2	0.05	6.5	6	12	7950	3.51	0.27	0.10	195	2	0.05	14	220	111000	341	0.06	35	<10	38
M99MZ012M	Khokhoo	20a	Pb-Cu ore	---	galena, malachite	0.010	8	1.0	220	23.2	0.40	280	<0.5	2	0.01	1	<1	7	1135	1.09	0.18	0.04	50	<1	0.02	3	60	5210	42	0.01	10	<10	272
M99MZ013R	Khokhoo	20b	silicified rock	hydrothermal?	---	<0.005	<1	<0.2	<10	0.2	6.00	760	1.0	<2	0.16	<0.5	1	7	8	0.30	0.82	0.06	45	<1	3.68	3	150	86	207	0.03	1	<10	32
M99MZ014R	South Camp	25c	dunite	---	---	<0.005	1	<0.2	<10	<0.2	0.46	100	<0.5	<2	0.1	<0.5	105	1675	4	5.28	0.06	15.00	485	<1	0.14	2230	70	26	<1	<0.01	10	<10	30
M99MZ018R	Erdenet	Khujiriin gol	granodiorite	potassic alteration?	---	<0.005	8	<0.2	<10	<0.2	8.31	680	2.0	<2	2.65	<0.5	16	49	72	3.88	2.57	1.75	1110	<1	3.14	42	990	62	556	0.50	108	<10	460
M99MZ019R	Erdenet	Khujiriin gol	andesite	---	magnetite	<0.005	7	<0.2	<10	<0.2	7.90	1940	2.0	<2	1.84	<0.5	9	10	113	2.89	2.8	0.51	750	<1	2.35	8	680	26	605	0.37	77	<10	62
M99MZ020R	Erdenet	Khujiriin gol	monzonite	---	---	<0.005	7	0.2	<10	<0.2	8.84	780	4.0	<2	0.68	<0.5	7	12	16	1.91	3.68	0.55	370	<1	3.95	9	540	106	378	0.25	38	<10	116
M99MZ021R	Erdenet	Khujiriin gol	diorite	---	red hematite	<0.005	<1	<0.2	10	<0.2	8.57	650	1.0	<2	3.8	<0.5	22	32	48	5.28	1.47	2.11	1090	<1	3.43	23	1490	14	776	0.65	163	<10	126
M99MZ022R	Erdenet	Tsagaan chuluut (Talbulag)	dacite	---	---	<0.005	<1	<0.2	<10	<0.2	8.66	880	2.0	<2	2.89	<0.5	21	42	50	3.61	2.7	1.21	650	<1	2.97	29	1130	24	1155	0.51	131	<10	70
M99MZ023R	Erdenet	Tsagaan chuluut (Talbulag)	volcanic rock	silicification	quartz veinlet	<0.005	2	0.2	<10	<0.2	5.99	1330	1.5	<2	0.2	<0.5	1	9	4	0.62	4.11	0.04	260	<1	2.10	1	230	28	158	0.09	10	<10	18
M99MZ024R	Erdenet	SAR25	granite	---	---	<0.005	7	<0.2	<10	<0.2	6.24	700	1.0	<2	0.49	<0.5	4	11	12	1.62	3.97	0.19	240	1	2.13	3	210	24	337	0.27	46	<10	26
M99MZ025R	Erdenet	SAR25	granodiorite	---	pyrite, limonite	<0.005	<1	<0.2	<10	<0.2	8.79	930	2.0	<2	3.31	<0.5	32	113	42	5.51	2.21	2.95	910	<1	3.27	65	2990	34	1200	0.81	188	<10	102

Table A-15 Geochemical grade assay results of rock samples

Phase I survey

Sample	Region	Name of occurrence	Rock Name	Alteration	Mineralization	Au (g/t)	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)
M99MZ026R	Erdenet	Tsagaan chuluut	silicified rock	---	limonite along cracks	<0.005	8	0.2	<10	<0.2	6.05	750	1.5	<2	0.09	<0.5	<1	7	1	0.45	3.1	0.07	65	1	2.56	<1	80	20	101	0.10	6	<10	12
M99MZ027R	Erdenet	Tsagaan chuluut	silica sinter?	---	---	<0.005	14	0.2	<10	<0.2	6.70	650	0.5	<2	0.35	<0.5	<1	4	<1	0.53	3.29	0.02	30	3	3.62	<1	50	6	79	0.12	6	<10	2
M99MZ028R	Erdenet	Zauchiin gol	andesite	silicification	malachite	0.025	25	0.2	10	14.8	8.87	390	1.5	26	0.4	0.5	78	<1	8750	2.34	2.36	0.63	325	1	2.75	5	1310	260	156	0.16	49	<10	90
M99MZ029R	Erdenet	Zauchiin gol	silicified rock	silicification	---	0.010	79	1.8	200	0.6	6.49	800	2.0	<2	0.03	<0.5	1	2	99	0.61	4.65	0.14	250	<1	0.21	<1	110	506	128	0.06	6	<10	90
M99MZ030R	Erdenet	Tourmaline	granitic rock	tourmaline-biotite	---	<0.005	3	0.4	20	0.2	6.91	510	1.5	<2	0.02	<0.5	<1	11	12	1.06	3.02	0.42	35	1	0.31	<1	260	78	25	0.14	54	<10	18
M99MZ031R	Erdenet	Tourmaline	syenite	---	---	<0.005	2	0.2	<10	<0.2	8.03	640	2.0	<2	0.91	<0.5	4	13	9	1.68	3.71	0.32	140	1	3.07	4	390	14	203	0.29	42	<10	54
M99MZ032R	Erdenet	Tourmaline	breccia	tourmaline network	---	<0.005	15	0.4	<10	<0.2	6.32	760	0.5	<2	0.1	<0.5	1	9	12	3.05	2.57	0.27	60	8	2.31	1	460	26	96	0.07	27	<10	26
M99MZ033R	Erdenet	Tourmaline	granitic rock	---	pyrite diss	<0.005	1	0.2	30	0.2	7.47	140	0.5	<2	1.88	<0.5	11	11	7	4.30	1.62	0.94	785	<1	3.89	9	600	120	81	0.09	101	<10	82
M99MZ034R	Erdenet	SAR188	granodiorite	epidote	---	<0.005	1	<0.2	<10	<0.2	8.89	230	0.5	<2	9.83	<0.5	13	23	5	6.01	1.76	0.68	1025	<1	0.33	6	980	12	2810	0.45	208	<10	32
M99MZ035R	Erdenet	SAR188	granitic rock	tourmaline	---	<0.005	56	0.2	20	<0.2	4.78	10	0.5	<2	0.38	<0.5	11	12	7	1.88	0.12	0.48	150	<1	2.41	3	740	96	104	0.29	59	<10	38
M99MZ037R	Erdenet	Under	granodiorite	limonite	---	<0.005	16	0.4	<10	<0.2	7.75	480	1.5	<2	1.56	<0.5	8	17	32	5.99	1.64	0.44	350	<1	4.34	3	1040	14	203	0.45	136	<10	26
M99MZ038R	Erdenet	Under	granodiorite	---	---	<0.005	5	0.2	<10	<0.2	7.85	620	1.5	<2	3.14	<0.5	16	18	50	4.44	2.2	1.20	785	<1	3.06	6	1060	8	356	0.52	113	<10	54
M99MZ040R	Erdenet	Under	quartz porphyry	oxidization	---	<0.005	2	<0.2	<10	<0.2	7.34	980	1.0	<2	0.11	<0.5	1	3	5	0.77	3.38	0.13	50	<1	3.67	<1	170	16	73	0.05	13	<10	10
M99MZ049R	Erdenet	Mogoin gol 2	silicified rock	tourmaline?	---	<0.005	7	<0.2	<10	<0.2	6.17	260	0.5	<2	0.19	<0.5	1	4	2	2.67	2.22	0.04	130	<1	1.15	<1	240	18	106	0.10	16	<10	8
M99MZ052R	Bulgan West	Urmiin tsgaan nuur	tuff breccia	---	---	<0.005	3	<0.2	<10	<0.2	9.10	1020	2.0	<2	1.94	<0.5	14	24	36	3.37	2.98	1.28	575	<1	3.73	15	1300	20	893	0.52	104	<10	72
M99MZ053R	Bulgan West	Urmiin tsgaan nuur	syenite	---	---	<0.005	1	0.2	<10	<0.2	6.97	1760	1.5	<2	0.18	<0.5	1	6	9	0.99	4.94	0.21	180	<1	2.13	<1	100	14	165	0.10	10	<10	28
M99MZ060R	Bulgan West	Undrakh	quartz veinlet	potassic alteration	malachite, chalcocite	<0.005	3	<0.2	<10	1.6	4.62	600	0.5	<2	0.97	<0.5	5	6	122	0.61	1.8	0.07	140	7	2.10	1	90	50	712	0.03	32	<10	10
M99MZ061M	Bulgan	Tsookher mert	quartz vein	sericitic	limonite	0.395	49	61.0	1580	35.2	1.57	70	0.5	6	0.04	5.5	<1	12	89	0.26	0.73	0.08	35	16	0.06	1	40	16100	14	0.01	28	<10	150
M99MZ062M	Bulgan	Tsookher mert	quartz vein	sericitic	azurite	6.290	395	900.0	810	554.0	1.07	80	0.5	102	0.02	83.5	1	18	1070	0.22	0.45	0.06	25	3	0.04	<1	50	25900	16	<0.01	6	<10	170
M99MZ063R	Bulgan	Tsookher mert	granitic rock	sericitic	---	0.110	15	40.0	40	192.0	5.81	1940	0.5	<2	0.37	1.5	5	11	120	0.79	3.27	0.21	175	<1	1.54	3	210	3660	153	0.08	19	<10	372

Table A-15 Geochemical grade assay results of rock samples

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Phase I survey

Sample	Region	Name of occurrence	Rock Name	Alteration	Mineralization	Au (g/t)	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)
M99MZ064M	Bulgan	Tsookher mert	quartz vein	sericitic	malachite, azurite, chalcocopyrite?	1.140	792	1000.0	2450	537.0	0.99	110	0.5	200	0.05	167.5	<1	9	1940	0.14	0.42	0.05	15	2	0.03	1	50	119000	30	<0.01	6	<10	396
M99MZ066M	Bulgan	Khar uul	quartz veinlet	epidote	Cu oxide	0.010	7	10.5	290	6.6	9.13	20	1.5	---	13.95	1.5	15	93	13000	4.25	0.13	0.88	480	<1	0.93	43	---	720	160	0.52	260	<10	28
M99MZ067M	Bulgan	Khar uul	quartz veinlet	epidote	Cu oxide	<0.005	<1	0.8	50	0.6	8.71	20	1.5	<2	13	<0.5	14	83	1365	2.87	0.12	0.71	465	<1	0.39	33	1070	96	100	0.39	192	<10	28
M99MZ068R	Bulgan	SAR197	quartz veinlet	---	---	<0.005	1	0.4	<10	<0.2	7.09	260	0.5	<2	3.62	<0.5	19	81	110	3.68	0.63	1.70	485	<1	3.89	46	1440	26	851	0.54	134	<10	64
M99MZ069R	Bulgan	SAR197	brecciated rock	---	limonite	<0.005	18	0.2	610	<0.2	8.11	930	1.5	<2	2.64	<0.5	22	34	81	4.09	2.84	1.63	740	<1	3.69	41	3350	42	626	0.67	169	<10	54
M99MZ070R	Bulgan	SAR205	quartz veinlet	silicification + epidote	---	<0.005	4	<0.2	<10	<0.2	7.28	180	3.0	<2	5.82	<0.5	9	4	3	2.79	1	0.62	1055	<1	1.13	3	990	108	2790	0.35	113	<10	52
M99MZ071R	Bulgan	SAR205	andesite	silicification + epidote	---	<0.005	<1	<0.2	<10	<0.2	8.92	30	2.0	<2	10.9	<0.5	14	52	12	4.87	0.15	0.48	600	<1	0.31	25	1410	28	3250	0.54	213	<10	32
M99MZ072R	Bulgan	SAR202	quartz veinlet	silicification + epidote	---	<0.005	1	<0.2	<10	<0.2	6.33	40	2.0	<2	8.17	<0.5	13	44	36	3.33	0.11	0.82	525	<1	0.50	34	1520	30	1460	0.49	118	<10	34
M99MZ073M	Bulgan	SAR204	quartz veinlet	silicification + epidote	malachite	0.005	1	<0.2	540	4.8	8.18	210	1.5	<2	4.73	<0.5	20	61	7060	3.53	0.49	1.76	705	<1	3.56	48	1870	28	2080	0.61	131	<10	56
M99MZ074M	Bulgan	SAR204	quartz veinlet	silicification + epidote	malachite	<0.005	3	<0.2	1050	10.0	8.49	10	1.5	---	10.95	<0.5	9	55	20600	4.05	0.04	0.27	630	<1	0.18	23	---	30	3800	0.51	198	<10	<2
M99MZ075R	Zaamar West	SAR M-2	andesite	zeolite, silica	---	<0.005	<1	<0.2	60	<0.2	7.25	1010	1.5	6	4.64	<0.5	36	193	133	6.34	2.13	2.83	855	<1	3.22	107	3610	14	1095	1.22	193	<10	108
M99MZ076R	Zaamar West	Mt. Eagle North	tuff	silicification	---	<0.005	15	0.4	<10	<0.2	7.68	300	1.5	<2	2.93	<0.5	5	74	25	0.85	1.58	1.91	135	<1	3.20	29	280	4	361	0.49	131	<10	18
M99RK001R	Uubulan	Gua ulaan uul	float, tuff breccia	white-reddish, acidic alteration, kaolin, limonite, weak silicification	---	<0.005	4	<0.2	10	1.0	7.08	810	3.0	<2	0.08	<0.5	1	4	13	0.70	4.97	0.06	75	36	2.71	<1	190	38	69	0.21	15	<10	14
M99RK002R	Khujirt	Zost tolgoi	dacitic tuff breccia	reddish(white), moderate silicification, limonite, sericite	---	<0.005	8	<0.2	<10	<0.2	6.19	100	0.5	<2	0.28	<0.5	1	4	9	1.36	0.33	0.05	10	<1	4.66	<1	90	<2	77	0.04	2	<10	2
M99RK003R	Murun South	Donhor bulag	float, quartz vein	limonite stain	---	<0.005	5	<0.2	<10	<0.2	0.19	10	<0.5	<2	0.01	<0.5	<1	8	6	0.37	0.13	<0.01	5	<1	0.08	<1	10	4	5	<0.01	<1	<10	6
M99RK004R	Murun South	Donhor bulag	dacitic tuff breccia	silicification, sericite	---	<0.005	8	<0.2	<10	<0.2	5.72	290	3.0	<2	0.03	<0.5	1	4	<1	1.33	2.59	0.14	145	20	2.20	<1	170	16	58	0.20	4	<10	32
M99RK005M	Altgana gol	Altgana gol	quartz vein	limonite	molybdenite	<0.005	6	<0.2	10	<0.2	2.73	190	2.5	<2	0.04	<0.5	<1	6	19	0.19	1.68	0.03	10	431	0.08	<1	40	16	56	0.04	3	<10	4
M99RK006R	Altgana gol NW	Delger uul	basic tuff	calcite stain(W:10cm(Max))	---	<0.005	3	<0.2	<10	0.2	0.37	120	<0.5	<2	2.17	<0.5	92	1850	10	4.81	0.03	>15.00	645	<1	0.04	1970	70	<2	199	<0.01	6	<10	34
M99RK007R	Khokhoo	Quartz	float, quartz vein	limonite	---	<0.005	1	<0.2	10	<0.2	0.05	10	<0.5	<2	0.25	<0.5	<1	7	6	0.18	0.01	0.05	190	1	0.03	5	<10	2	4	<0.01	<1	<10	2
M99RK008R	Khokhoo	Z0b	quartz vein	weak limonite	---	<0.005	<1	<0.2	<10	<0.2	0.70	90	<0.5	<2	0.15	<0.5	1	17	<1	0.28	0.41	0.23	110	<1	0.06	16	80	2	12	0.02	8	<10	10

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Table A-15 Geochemical grade assay results of rock samples

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Phase I survey

Sample	Region	Name of occurrence	Rock Name	Alteration	Mineralization	Au (g/t)	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)
M99RK009R	Khokhoo	20b	quartz vein	weak limonite(hematite)	---	<0.005	<1	<0.2	<10	<0.2	0.18	810	<0.5	<2	0.03	<0.5	<1	15	<1	0.06	0.11	0.02	20	<1	0.04	2	10	<2	7	<0.01	1	<10	2
M99RK010R	Khokhoo	20b	float, granite?	silicification, weak limonite, greisen?(biotite+mica)	---	<0.005	<1	<0.2	<10	<0.2	7.10	170	1.5	<2	1.09	<0.5	3	9	1	0.56	0.78	0.19	160	<1	3.56	3	140	16	200	0.07	7	<10	20
M99RK011R	Khokhoo	20c	quartz vein?	greisen? (biotite+muscovite)	---	<0.005	<1	<0.2	<10	<0.2	5.74	450	0.5	<2	0.98	<0.5	7	33	<1	1.92	1.19	0.76	375	<1	1.74	18	520	14	169	0.21	45	<10	46
M99RK012R	Khokhoo	Quartz	float, quartz vein	hematite	---	<0.005	11	<0.2	<10	<0.2	0.14	10	<0.5	<2	0.01	<0.5	<1	7	<1	0.21	0.04	<0.01	30	<1	0.03	<1	40	<2	2	<0.01	1	<10	<2
M99RK013R	Khokhoo	Quartz	quartz vein	limonite	molybdenite?	<0.005	1	<0.2	<10	<0.2	0.18	40	<0.5	<2	10.5	0.5	<1	4	2	0.24	0.01	0.13	485	<1	0.12	<1	10	2	600	<0.01	1	<10	<2
M99RK014R	Khokhoo	Quartz	limestone	strong silicification	---	<0.005	1	<0.2	<10	0.2	0.36	<10	<0.5	2	19.25	<0.5	2	<1	<1	0.29	0.03	12.65	220	<1	0.23	<1	70	70	171	<0.01	<1	<10	40
M99RK015R	Khokhoo	Quartz	basalt? basic luff?	weak silicification	---	<0.005	1	<0.2	<10	0.2	1.84	<10	<0.5	6	>25.0	0.5	5	4	2	0.98	0.03	1.09	4790	<1	0.85	5	50	26	666	0.05	9	<10	28
M99RK016R	Khokhoo	Quartz	limestone	weak silicification	---	<0.005	1	<0.2	<10	<0.2	0.18	10	<0.5	2	19.55	<0.5	2	<1	<1	0.17	0.06	12.75	130	<1	0.09	<1	50	<2	123	0.01	<1	<10	2
M99RK017R	South Camp	25a	quartz vein	weak limonite	---	0.035	1	<0.2	<10	1.0	1.47	40	<0.5	<2	0.23	<0.5	<1	7	<1	0.24	0.18	0.10	20	<1	1.06	1	40	28	25	<0.01	1	<10	4
M99RK018R	South Camp	25e	float, quartz vein	weak limonite	---	<0.005	1	<0.2	<10	<0.2	0.36	30	<0.5	<2	15.15	<0.5	1	11	14	0.32	0.1	0.12	565	<1	0.09	9	100	4	974	0.01	4	<10	4
M99RK019R	South Camp	25e	quartz vein	fluorite	---	<0.005	<1	<0.2	<10	<0.2	0.10	10	<0.5	<2	16.75	<0.5	<1	9	8	0.08	0.02	0.05	650	<1	0.04	2	30	<2	1045	<0.01	1	<10	<2
M99RK022R	Erdenet	Khujirin gol	float, granite	quartz veinlet in(W:3mm), limonite	---	<0.005	19	0.2	<10	<0.2	7.29	560	1.5	<2	1.79	<0.5	11	32	27	3.18	2.56	1.22	855	<1	2.88	11	870	54	534	0.44	94	<10	102
M99RK023R	Erdenet	Khujirin gol	quartz vein	quartz network, fluorite	---	<0.005	1	<0.2	<10	<0.2	2.46	170	0.5	<2	0.15	<0.5	1	4	14	0.37	1.09	0.18	170	<1	1.09	2	140	52	37	0.06	8	<10	200
M99RK024R	Erdenet	SAR144	silicified rock(granite)	silicification(W:20cm), epidote, quartz vein in, biotite rich	---	<0.005	<1	<0.2	<10	<0.2	8.65	10	1.5	<2	10.45	<0.5	14	14	36	3.68	0.13	1.01	655	<1	0.69	12	940	10	2520	0.44	185	<10	38
M99RK025M	Erdenet	SAR144	granite	potassic(k-feldsper+biotite), limonite	malachite along fracture (2*3m)	0.005	<1	<0.2	<10	2.0	8.10	260	0.5	---	4.53	<0.5	48	19	20200	4.67	0.61	1.90	650	15	2.73	37	---	6	1135	0.72	159	<10	180
M99RK027R	Erdenet	SAR136	aplite	quartz vein	---	<0.005	<1	<0.2	<10	<0.2	5.28	620	0.5	<2	0.93	<0.5	1	3	108	0.57	3.15	0.06	90	<1	1.94	<1	30	4	368	0.04	18	<10	4
M99RK028R	Erdenet	Zauchin gol	granite	---	---	<0.005	9	<0.2	<10	0.2	8.10	780	1.5	<2	2.43	<0.5	14	13	42	3.12	2.31	0.91	745	<1	3.74	10	1010	20	840	0.35	79	<10	120
M99RK029R	Erdenet	Central	granite	moderate silicification, quartz+sericite+mica+tourmaline, limonite	---	<0.005	<1	<0.2	<10	<0.2	8.26	830	<0.5	<2	0.07	<0.5	<1	9	11	0.26	1.68	0.10	10	9	0.27	<1	530	2	747	0.08	47	<10	<2
M99RK031M	Erdenet	Central	granite	potassic, weak limonite	malachite along cracks	<0.005	1	<0.2	<10	0.8	7.75	830	1.5	8	1.01	<0.5	7	7	4240	1.69	2.29	0.52	140	21	3.47	9	550	8	747	0.18	53	<10	28
M99RK032M	Erdenet	Central	diorite	epidote, limonite	malachite along cracks	0.010	1	<0.2	10	<0.2	9.72	810	1.5	8	2.72	<0.5	19	4	5510	4.09	2	1.53	660	<1	3.96	12	1290	12	1495	0.38	93	<10	94

Table A-15 Geochemical grade assay results of rock samples

(8/9)

Phase I survey

Sample	Region	Name of occurrence	Rock Name	Alteration	Mineralization	Au (g/t)	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)
M99RK033R	Erdenet	SAR200	aplite	quartz vein, quartz+magnetite	---	<0.005	2	<0.2	<10	<0.2	3.29	180	2.0	<2	0.09	<0.5	<1	20	34	0.08	2.44	0.02	20	<1	1.05	<1	10	8	76	<0.01	1	<10	<2
M99RK034R	Erdenet	SAR238	granite	quartz+tourmalin vein in	---	<0.005	<1	<0.2	<10	<0.2	6.22	430	0.5	<2	2.08	<0.5	5	12	16	2.03	2	0.46	450	<1	2.52	6	330	12	281	0.22	54	<10	34
M99RK037R	Erdenet	SAR238	quartz vein	---	---	<0.005	<1	<0.2	<10	<0.2	2.58	100	0.5	<2	0.21	<0.5	<1	11	8	0.26	1.5	0.04	55	<1	1.12	<1	10	2	24	0.03	3	<10	8
M99RK039M	Erdenet	Shand	granite	k-feldspar rich, weak limonite	malachite along cracks	0.050	3	<0.2	<10	2.2	7.26	470	2.0	<2	0.37	<0.5	11	10	9490	3.54	2.41	0.56	375	17	3.60	10	490	198	127	0.23	55	<10	130
M99RK041R	Erdenet	SAR233	float, silicified rock	silicification, hematite, chlorite?	---	<0.005	<1	<0.2	<10	<0.2	3.21	10	<0.5	<2	6.56	<0.5	2	14	113	0.45	0.06	0.06	125	1	0.04	1	170	40	19	0.03	26	<10	10
M99RK042R	Erdenet	SAR235	granite	weak silicification(W:10m)	---	<0.005	1	<0.2	<10	<0.2	6.11	450	<0.5	<2	3.03	<0.5	2	5	37	1.41	1.17	0.14	220	<1	2.87	<1	210	4	841	0.14	33	<10	12
M99RK043R	Erdenet	SAR235	aplite	silicification, chlorite?	---	<0.005	<1	<0.2	<10	<0.2	6.61	40	1.5	<2	0.34	<0.5	<1	3	3	0.22	4.53	0.03	110	<1	2.49	<1	<10	26	29	0.02	1	<10	14
M99RK045R	Bulgan West	Urmiin tsgaan nuur	lapilli tuff	---	---	<0.005	2	<0.2	<10	<0.2	7.81	1290	2.5	<2	1.39	<0.5	8	7	14	2.64	3.45	0.67	635	<1	3.47	3	1010	18	659	0.41	62	<10	80
M99RK046R	Bulgan West	Urmiin tsgaan nuur	lapilli tuff	silicification	---	<0.005	<1	<0.2	<10	<0.2	8.29	960	3.0	<2	1.1	<0.5	7	6	19	1.99	3.64	0.53	460	<1	3.73	2	600	16	434	0.32	44	<10	52
M99RK047R	Bulgan West	Urmiin tsgaan nuur	lapilli tuff	silicification, quartz vein in (W:2mm, coarse grain, white)	---	<0.005	<1	<0.2	<10	<0.2	6.90	280	3.0	<2	0.39	<0.5	1	7	15	0.86	4.09	0.13	290	<1	2.98	<1	130	28	114	0.20	10	<10	34
M99RK048R	Bulgan West	Ereen ikher	silicified rock	moderate silicification, sericite?, limonite	---	<0.005	7	0.2	<10	<0.2	7.52	1130	1.5	<2	0.2	<0.5	4	5	<1	0.97	2.27	0.09	175	<1	4.18	1	180	12	192	0.09	6	<10	32
M99RK049R	Bulgan West	Ereen ikher	lapilli tuff	moderate silicification, limonite	---	<0.005	2	<0.2	<10	<0.2	6.82	1010	1.5	<2	0.14	<0.5	1	4	<1	0.71	2.35	0.05	335	<1	3.89	<1	210	8	126	0.09	5	<10	42
M99RK050R	Bulgan West	Ereen ikher	lapilli tuff	moderate silicification, limonite, calcite stain	---	<0.005	19	0.4	<10	<0.2	6.54	900	1.5	<2	0.87	<0.5	2	3	3	1.21	6.79	0.08	155	<1	0.28	<1	560	12	81	0.27	15	<10	46
M99RK051R	Bulgan West	Ereen ikher	lapilli tuff	silicification, white, sericite?, limonite	---	<0.005	187	0.8	130	<0.2	7.43	640	1.5	<2	0.05	<0.5	2	2	1	1.81	7.86	0.02	170	7	0.73	<1	340	30	86	0.33	23	<10	24
M99RK052M	Bulgan West	Zaiian	granite	limonite stain, potassic alteration	malachite	0.010	2	<0.2	10	<0.2	7.21	810	2.0	<2	0.76	<0.5	6	5	710	1.34	4.06	0.15	145	<1	2.60	4	320	10	358	0.19	35	<10	20
M99RK053M	Bulgan West	Zaiian	granite	strong limonite, silicification	malachite, azurite	0.535	6090	3.8	80	82.8	6.93	420	2.5	---	0.35	2	5	5	49100	3.03	0.6	0.04	75	341	4.65	3	---	36	286	0.19	13	140	24
M99RK054R	Bulgan West	Undrakh	quartz vein	limonite	malachite, chalcopyrite, bornite	0.215	2500	1.8	30	33.8	2.82	180	1.0	---	0.16	<0.5	1	7	18300	1.73	0.24	0.01	30	208	1.81	1	---	14	117	0.08	11	50	16
M99RK055M	Bulgan West	Undrakh	granite	limonite	malachite along fracture	0.005	15	<0.2	40	1.4	5.21	570	1.5	2	0.26	<0.5	5	2	8860	0.37	2.08	0.09	25	14	2.34	1	90	2	144	0.01	5	<10	26
M99RK057M	Bulgan West	Undrakh	granite	limonite, potassic alteration, weak silicification, mica, quartz vein	malachite	<0.005	1	<0.2	<10	0.8	6.54	1160	1.5	<2	0.42	<0.5	1	3	465	0.27	4.11	0.05	55	<1	2.28	<1	40	12	208	0.05	5	<10	20
M99RK058R	Bulgan	Jasiin buuts	dacite?	white, strong silicification, pyrite rich (limonite), mica	---	<0.005	2	<0.2	<10	<0.2	1.22	190	<0.5	<2	<0.01	<0.5	<1	9	14	0.17	0.54	0.04	5	7	0.07	<1	40	<2	9	0.05	5	<10	2

Table A-15 Geochemical grade assay results of rock samples

Phase I survey

Sample	Region	Name of occurrence	Rock Name	Alteration	Mineralization	Au (g/t)	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)
M99RK059R	Bulgan	Jasiin buuts	dacite?	white, moderate silicification, pyrite rich(limonite)	---	<0.005	1	<0.2	<10	<0.2	7.63	570	0.5	<2	0.02	<0.5	<1	2	5	0.32	3.58	0.25	45	<1	0.30	<1	40	<2	12	0.17	32	<10	10
M99RK060R	Bulgan	Jasiin buuts	dacite?	white, silicification, pyrite(limonite)	---	<0.005	12	<0.2	<10	0.2	6.44	440	1.0	<2	1.69	<0.5	4	3	13	1.40	1.52	0.14	185	3	2.82	<1	610	14	476	0.38	45	<10	28
M99RK061R	Bulgan	Jasiin buuts	dacitic tuff	moderate silicification, pyrite rich, limonite along crack, sericite?, mica	---	<0.005	4	<0.2	<10	<0.2	7.18	2610	1.0	<2	0.07	<0.5	1	3	9	1.10	2.96	0.24	75	<1	0.65	<1	160	30	71	0.11	23	<10	18
M99RK062R	Bulgan	Jasiin buuts	silicified rock	strong silicification, limonite along crack, sericite?, mica	---	<0.005	1	<0.2	<10	<0.2	1.62	400	<0.5	<2	0.01	<0.5	<1	15	10	0.17	0.68	0.03	20	<1	0.08	<1	60	6	27	0.14	14	<10	2
M99RK063R	Bulgan	SAR221	silicified rock	silicification, epidote, quartz veinlet	---	<0.005	5	<0.2	<10	<0.2	10.60	20	2.0	<2	13.7	<0.5	16	49	52	3.53	0.16	0.63	505	<1	0.84	24	1040	32	1480	0.40	242	<10	44
M99RK064R	Bulgan	SAR222	andesite	silicification, quartz veinlet in	---	<0.005	4	<0.2	<10	0.2	5.44	580	0.5	<2	0.85	<0.5	2	8	33	0.63	1.6	0.25	190	<1	2.79	<1	390	10	220	0.17	23	<10	28
M99RK065R	Bulgan	SAR219	silicified rock	white, silicified, sericite?	---	<0.005	4	<0.2	<10	<0.2	4.46	230	0.5	<2	0.13	<0.5	2	8	5	0.48	0.99	0.11	195	<1	2.04	1	120	16	37	0.07	16	<10	26
M99RK066R	Bulgan	SAR183	float, epidote vein	silicified, epidote, quartz veinlet in	---	<0.005	1	0.2	<10	<0.2	7.98	40	1.5	<2	8.53	<0.5	10	95	41	4.12	0.22	0.44	740	<1	1.45	27	1730	28	4120	0.59	143	<10	20
M99RK067M	Bulgan	SAR183	epidote+quartz vein	silicification, epidote	malachite	<0.005	<1	1.0	170	8.4	9.50	10	1.5	---	13.2	<0.5	14	38	19100	4.29	0.13	0.18	600	<1	0.27	27	---	62	5110	0.43	180	<10	2
M99RK068M	Bulgan	SAR182	epidote vein	silicified, epidote	malachite	0.010	3	0.2	<10	3.4	7.88	30	1.5	<2	9.9	<0.5	12	21	7430	2.84	0.12	0.24	510	<1	0.40	17	740	24	1825	0.27	311	<10	8
M99RK069R	Bulgan	Mt. Zayn davaa	white altered rock	weak silicification, weak pyrite dissemination, limonite, kaoline	---	<0.005	6	0.6	<10	0.2	8.93	400	<0.5	<2	0.15	<0.5	<1	6	54	0.42	0.27	0.02	5	<1	0.22	<1	990	30	699	0.38	67	<10	<2
M99RK070R	Bulgan	Mt. Zayn davaa	white altered rock	weak silicification, pyrite dissemination, limonite	---	<0.005	13	0.6	150	<0.2	9.04	300	<0.5	<2	0.15	<0.5	1	6	12	1.20	1.46	0.06	5	<1	0.32	<1	610	12	293	0.44	88	<10	6
M99RK071R	Bulgan	Mt. Zayn davaa	altered rock	brown, strong limonitization, montmorillonite?	---	<0.005	55	3.2	30	<0.2	7.35	340	<0.5	<2	0.6	<0.5	2	118	27	5.32	2.27	0.83	110	<1	0.48	5	910	12	280	0.70	159	<10	42
M99RK072R	Bulgan	Mt. Zayn davaa	altered rock	brown, strong limonitization	---	<0.005	186	3.4	30	<0.2	5.49	110	<0.5	<2	0.4	<0.5	3	40	84	16.35	1	0.31	25	<1	0.12	<1	910	2	84	0.55	162	<10	12
M99RK073R	Bulgan	Mt. Zayn davaa	altered rock	yellow-brown, limonite, weak acid leached	---	<0.005	3	0.4	<10	0.2	2.91	1180	<0.5	<2	0.13	<0.5	<1	14	17	0.99	0.26	0.03	5	<1	0.14	<1	1130	38	952	0.49	43	<10	6
M99RK074R	Bulgan	Mt. Zayn davaa	white altered rock	moderate silicification, pyrite dissemination, limonite	---	<0.005	100	0.4	60	<0.2	5.95	570	<0.5	<2	0.26	<0.5	1	22	9	1.12	0.98	0.07	10	<1	0.26	<1	2310	42	1415	0.37	47	<10	2
M99RK075M	Bulgan	SAR181	andesite	moderate silicification, epidote, hematite, 1*0.6cm	malachite	<0.005	1	0.2	590	7.8	8.23	30	0.5	---	13.45	<0.5	22	141	13300	4.19	0.1	0.78	435	<1	0.24	59	---	14	248	0.59	137	<10	28
M99RK076M	Bulgan	SAR194	andesite	epidote, silicification, quartz vein(W:3-5cm)	malachite	<0.005	<1	<0.2	10	5.4	8.41	10	1.5	14	14.4	<0.5	21	59	4400	4.54	0.07	1.18	560	<1	0.93	39	1630	12	144	0.50	186	<10	46
M99RK077R	Bulgan	Mt. Zayn davaa	float, white altered rock	white, kaoline?, weak silicification	---	<0.005	5	1.0	280	0.2	5.20	910	<0.5	<2	0.67	<0.5	<1	33	63	0.43	0.38	0.03	10	<1	0.19	<1	1970	100	1820	0.19	57	<10	2
M99RK078R	Bulgan	Mt. Zayn davaa	andesite	weak silicification, epidote, hematite	malachite	<0.005	6	<0.2	<10	4.8	6.83	1330	0.5	<2	2.31	<0.5	19	42	3100	3.46	1.76	1.65	590	<1	2.20	25	1880	6	1030	0.52	104	<10	54

Table A-15 Geochemical grade assay results of rock samples

(1/12)

Phase II survey

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	ppm
MOONK103	Erdenet West	Undrakh	Quartz vein		malachite	0.020	10	<0.2	30	2.8	4.25	80	2.5	<2	1.01	<0.5	4	7	2150	0.86	0.44	0.26	40	16	2.35	4	730	6	171	<0.01	3	<10	30
MOONK104	Erdenet West	Undrakh	Granitoid		malachite stained	0.010	<1	<0.2	40	1.8	5.90	400	1.5	<2	0.95	<0.5	2	6	5300	0.23	1.76	0.08	20	9	2.65	<1	210	6	141	0.02	4	<10	16
MOONK105	Erdenet West	Undrakh	Quartz vein			0.045	4	<0.2	30	9.4	0.09	<10	<0.5	<2	0.78	<0.5	<1	11	826	0.40	0.01	0.21	10	188	0.02	1	40	<2	13	<0.01	10	<10	8
MOONK106	Erdenet West	Undrakh	Granitoid			<0.005	1	<0.2	<10	<0.2	6.85	1050	1.0	<2	0.35	<0.5	2	13	248	0.37	4.84	0.17	45	2	2.09	5	310	16	180	0.08	8	<10	14
MOONK109	Erdenet West	Undrakh	Quartz vein			<0.005	19	<0.2	<10	0.6	0.04	<10	<0.5	<2	0.70	<0.5	<1	13	53	0.13	0.01	0.01	<5	<1	0.01	1	<10	<2	19	<0.01	2	<10	4
MOONK110	Erdenet West	Undrakh	Aplite			<0.005	<1	<0.2	<10	0.4	6.79	370	1.5	<2	0.30	<0.5	<1	5	101	0.29	4.87	0.01	25	2	2.36	<1	160	24	62	0.04	2	<10	10
MOONK111	Erdenet West	Danbatsuren	silicified rock			<0.005	49	0.2	<10	<0.2	0.11	100	<0.5	2	0.03	<0.5	<1	7	19	0.58	0.04	<0.01	10	1	0.01	1	140	<2	23	0.15	9	<10	6
MOONK114	Bulgan SW	Oyuut khonkhor	Network silicification	white mineral, limonite		0.005	29	1.6	40	0.2	5.22	140	3.0	<2	0.15	<0.5	6	16	25	1.98	0.58	0.67	165	5	1.76	10	1010	140	600	0.09	31	<10	222
MOONK115	Bulgan SW	Oyuut khonkhor	Network silicification	limonite		<0.005	83	0.8	30	0.6	8.29	670	2.5	<2	0.60	1.5	12	17	21	2.70	1.96	0.73	805	1	3.58	15	1470	236	551	0.20	71	<10	392
MOONK120	Bulgan SW	Oyuut khonkhor	silicified rock	silicification, limonitization		<0.005	10	0.8	140	1.4	3.72	110	2.0	<2	0.15	<0.5	3	14	18	0.77	0.13	1.09	95	<1	0.42	6	690	54	112	0.09	23	<10	62
MOONK121	Bulgan SW	Oyuut khonkhor	silicified rock	silicification, limonitization		<0.005	13	2.0	140	1.0	3.63	130	1.0	<2	0.93	<0.5	4	12	35	0.76	0.33	0.75	140	2	0.28	8	2650	28	210	0.11	37	<10	50
MOONK122	Tavt	Ereen No.1 ore body	Diorite?	silicification	malachite, limonite	2.320	<1	8.0	160	9.2	6.82	1040	<0.5	Intfe	4.17	<0.5	7	69	11900	3.30	3.51	0.40	590	26	0.07	12	Intfe	68	935	0.19	112	<10	36
MOONK123	Tavt	Ereen No.1 ore body	Altered rock		?	3.080	<1	14.0	2530	15.8	9.76	360	0.5	Intfe	1.69	0.5	12	89	39800	3.28	1.91	1.33	490	122	0.41	43	Intfe	1005	347	0.43	140	10	214
MOONK124	Tavt	Ereen No.1 ore body	Quartz vein		malachite, limonite	54.140	9	135.0	1040	25.8	0.12	20	<0.5	Intfe	0.04	0.5	<1	6	24000	1.17	0.01	0.01	5	59	<0.01	4	Intfe	588	10	<0.01	29	<10	12
MOONK135	Erdenet West	Tsagaan chuluut East	Andesite?	strongly silicified	limonitization	0.030	3	0.6	10	0.2	8.11	550	0.5	<2	0.02	<0.5	1	10	158	0.85	2.80	0.02	20	<1	0.58	1	310	34	289	0.08	12	<10	2
MOONK137	Erdenet West	Tsagaan chuluut East	silicified rock	silicification		0.015	11	0.4	<10	<0.2	6.41	840	1.5	<2	0.06	<0.5	2	7	24	0.51	5.88	0.29	25	1	0.21	3	80	12	30	0.09	5	<10	14
MOONK138	Erdenet West	Tsagaan chuluut East	Andesite?	argillization	limonitization	0.020	22	1.4	10	0.2	9.60	680	1.0	<2	0.33	<0.5	3	32	98	3.71	2.19	0.37	65	3	3.48	4	530	16	330	0.36	139	<10	22
MOONK139	Erdenet West	Tsagaan chuluut East	Trachy andesite	epidote	---	<0.005	22	1.0	<10	<0.2	9.22	720	1.5	<2	0.93	<0.5	18	13	12	3.91	2.33	1.29	1335	<1	4.48	14	1090	18	442	0.43	121	<10	134
MOONK140	Erdenet West	Tsagaan chuluut South	Andesite?	silicification, argillization	---	<0.005	36	0.8	<10	<0.2	7.10	420	<0.5	<2	0.04	<0.5	1	4	32	1.19	0.99	0.03	15	6	0.24	1	530	54	278	0.05	21	<10	6

Table A-15 Geochemical grade assay results of rock samples

Phase II survey

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Ba	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%
MOONK141	Erdene West	Tsagaan chuluut South	Rhyolite	silicification, argillization	---	<0.005	5	0.2	10	<0.2	7.72	550	0.5	<2	0.04	<0.5	1	7	11	0.65	2.52	0.06	20	1	0.57	4	370	22	301	0.12	24	<10	12
MOONK142	Erdene West	Tsagaan chuluut South	Rhyolite	silicification, argillization (alunite?)	---	<0.005	1	0.2	<10	<0.2	5.80	800	<0.5	<2	0.09	<0.5	<1	11	14	0.41	1.00	0.01	<5	2	1.03	1	1140	44	661	0.05	37	<10	2
MOONK144	Erdene West	Tsagaan chuluut North	Trachy andesite	less	---	<0.005	3	<0.2	<10	<0.2	9.53	720	1.5	<2	1.48	<0.5	20	39	37	4.36	2.13	1.73	1200	<1	4.38	22	1660	14	691	0.81	153	<10	100
MOONK146	Erdene West	Tsagaan chuluut North	?	silicification, limonitization	---	<0.005	10	<0.2	10	<0.2	0.23	20	<0.5	<2	0.02	<0.5	3	16	27	10.95	0.02	0.01	20	25	<0.01	3	240	10	18	0.16	47	<10	38
MOONK147	Erdene West	Tsagaan chuluut North	?	silicification	---	0.005	<1	<0.2	10	<0.2	0.27	10	<0.5	<2	0.01	<0.5	3	17	8	0.15	0.01	0.01	5	6	<0.01	5	120	8	27	0.19	6	<10	46
MOONK148	Erdene West	Tsagaan chuluut North	tuff breccia	silicification, argillization	---	<0.005	<1	0.4	90	<0.2	13.80	900	1.0	<2	0.31	<0.5	1	105	5	0.90	3.33	<0.01	<5	<1	1.81	<1	3600	28	2130	0.59	228	<10	2
MOONK149	Erdene West	Tsagaan chuluut North	tuff breccia	silicification, argillization	---	<0.005	11	<0.2	<10	0.2	5.79	860	<0.5	<2	0.11	<0.5	1	88	11	0.49	1.61	0.02	5	1	0.60	1	1670	46	1140	0.54	118	<10	6
MOONK150	Erdene West	Tsagaan chuluut North	tuff breccia	silicification, argillization, white vein (kaolinite?)	---	<0.005	<1	0.4	10	<0.2	5.77	810	<0.5	<2	0.03	<0.5	1	77	7	0.11	1.10	<0.01	<5	1	0.37	<1	530	26	547	0.87	89	<10	<2
MOONK151	Erdene West	Tsagaan chuluut North	tuff breccia	silicification, argillization	---	<0.005	<1	0.2	<10	<0.2	4.35	970	0.5	<2	0.08	<0.5	1	62	10	0.13	0.93	0.01	15	1	0.33	3	1270	18	1100	0.74	97	<10	4
MOONK152	Erdene West	Tsagaan chuluut North	tuff breccia	silicification, argillization	---	<0.005	<1	0.2	<10	<0.2	0.47	470	<0.5	<2	0.10	0.5	1	23	8	0.35	0.12	0.01	15	3	0.01	1	240	8	129	0.63	21	<10	2
MOONK153	Erdene West	Tsagaan chuluut North	tuff breccia	silicification, argillization	---	<0.005	9	<0.2	<10	<0.2	7.22	140	<0.5	<2	0.07	<0.5	<1	9	3	0.40	0.13	<0.01	5	2	0.16	1	760	30	304	0.07	26	<10	2
MOONK155	Erdene West	Mogoin gol South	?	silicification, argillization, limonitization	---	<0.005	<1	1.0	<10	<0.2	8.08	870	2.0	<2	0.27	<0.5	<1	4	9	0.81	4.46	0.09	145	3	2.94	3	160	36	271	0.14	15	<10	30
MOONK156	Erdene West	Mogoin gol South	Andesite	tourmaline, k-feldspar, muscovite	---	<0.005	27	1.0	<10	<0.2	9.31	290	0.5	2	5.45	<0.5	37	49	15	4.91	1.00	2.44	1350	<1	3.27	19	990	18	847	0.55	183	<10	88
MOONK157	Erdene West	Mogoin gol South	Andesite	tourmaline, ep	---	<0.005	47	1.2	<10	<0.2	6.83	800	1.5	<2	0.48	<0.5	3	10	1	0.98	2.38	0.17	440	<1	3.54	6	180	26	164	0.14	7	<10	132
MOONK159	Erdene West	Mogoin gol South	Microdiorite	?	---	<0.005	22	0.6	<10	<0.2	9.05	700	1.0	2	4.21	<0.5	22	3	46	5.61	1.69	1.47	1770	<1	3.17	<1	2080	38	761	0.86	183	<10	192
MOONK160	Erdene West	Mogoin gol South	tuff	weakly silicified, argillized	---	<0.005	14	0.4	<10	1.8	7.97	920	2.0	<2	0.27	<0.5	1	4	7	0.82	4.37	0.09	140	4	3.00	2	200	26	257	0.13	14	<10	28
MOONK162	Erdene West	Tsagaan chuluut	tuff	strong limonitization	---	<0.005	4	<0.2	<10	<0.2	3.65	580	<0.5	<2	0.14	<0.5	3	43	18	3.49	0.08	0.01	25	3	0.02	1	1770	30	1415	0.78	58	<10	2
MOONK163	Erdene West	Zhuukhin gol	Andesite	silicification	---	<0.005	13	<0.2	<10	0.2	7.10	840	1.5	2	0.41	<0.5	2	10	1	0.94	2.43	0.13	440	<1	3.59	5	180	62	154	0.14	6	<10	138
MOONK164	Erdene West	Zhuukhin gol	Hydrothermal breccia	silicification, limonitization	---	<0.005	11	<0.2	10	<0.2	6.66	940	1.5	<2	0.56	<0.5	1	7	3	1.05	2.83	0.17	385	4	3.11	1	160	18	203	0.14	13	<10	54

Table A-15 Geochemical grade assay results of rock samples

(3/12)

Phase II survey

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%
MOOH100	Tariat	Terkhiin tsagaan nuur	Quartz vein			<0.005	32	3.0	<10	0.2	0.16	10	1.5	34	0.31	<0.5	<1	12	1	0.13	0.05	0.01	195	2	0.03	<1	20	<2	27	<0.01	<1	540	6
MOOH107	Tosontsengel	Davaa	Quartz veinlet network	druzy quart veinlet, silicification		<0.005	<1	<0.2	<10	<0.2	3.18	220	0.5	2	0.64	<0.5	1	15	2	0.65	1.60	0.16	270	<1	1.43	4	200	2	80	0.10	14	<10	26
MOOH108	Tosontsengel	Quartzite	Syenite		unknown black minerals	<0.005	<1	<0.2	<10	<0.2	6.57	50	2.0	<2	0.04	<0.5	<1	4	<1	0.94	2.20	0.04	55	<1	4.01	<1	120	24	46	0.14	12	<10	18
MOOH109	Tosontsengel	Quartzite	Silicified rock	silicification, argillization, quartz veinlet		<0.005	5	0.4	<10	<0.2	6.68	720	1.5	<2	0.08	<0.5	1	10	4	0.77	3.12	0.37	195	5	0.15	1	380	14	39	0.30	42	<10	16
MOOH110	Tosontsengel	Quartzite	Silicified rock	silicification	pyrite	<0.005	3	<0.2	<10	<0.2	6.25	80	1.5	<2	0.01	<0.5	1	4	<1	0.88	3.84	0.08	240	9	2.23	<1	70	38	36	0.09	7	<10	12
MOOH113	Tsagaan uul	Khunkh tsakhir	Silicified rock	silicification		<0.005	7	<0.2	<10	<0.2	7.73	590	2.5	<2	3.92	<0.5	43	115	21	6.93	3.30	3.12	945	2	3.21	75	4740	16	1060	1.53	158	<10	154
MOOH115	Tsagaan uul	Khunkh tsakhir	Quartz vein			<0.005	21	0.8	10	21.0	0.19	<10	<0.5	284	0.03	<0.5	1	11	25	0.16	0.08	0.01	25	6	0.03	<1	30	74	13	<0.01	<1	10	14
MOOH119	Tsagaan uul	Tsagaan uul	Dolomite		pyrrhotite?	<0.005	355	16.5	<10	<0.2	6.19	430	70.0	4	6.63	<0.5	51	65	15	4.60	4.84	1.85	4020	80	0.29	231	1780	8	499	0.20	477	750	72
MOOH122	Tsagaan uul	Deed ulaan tolgoi	Quartz vein			<0.005	5	<0.2	<10	<0.2	6.57	350	5.5	2	0.08	<0.5	1	10	<1	1.04	4.45	0.47	65	104	0.38	2	300	8	38	0.11	80	70	2
MOOH123	Tsagaan uul	Deed ulaan tolgoi	Quartz vein			<0.005	7	<0.2	<10	0.2	6.58	620	11.0	<2	0.10	<0.5	1	7	<1	1.11	2.45	0.37	65	131	2.04	1	340	14	88	0.05	38	10	28
MOOH124	Tsagaan uul	Deed ulaan tolgoi	Felsite dyke			<0.005	3	<0.2	<10	<0.2	3.73	310	1.5	<2	0.08	<0.5	1	9	<1	0.07	2.85	0.04	15	9	1.15	3	100	8	58	0.01	5	<10	6
MOOH125	Tsagaan uul	Nariin azarga	Sandstone			<0.005	10	0.6	10	0.2	6.66	620	2.0	<2	0.85	<0.5	<1	5	11	0.47	4.32	0.02	55	5	2.23	9	40	18	408	0.03	5	<10	44
MOOH128	Murun West	Tsagaan tolgoi	Granite			<0.005	<1	<0.2	<10	<0.2	8.33	1090	2.5	<2	1.04	<0.5	5	7	101	1.46	4.07	0.41	355	6	3.25	<1	610	18	571	0.16	28	<10	138
MOOH129	Murun West	Tsagaan tolgoi	Granite			0.005	<1	<0.2	<10	0.8	7.10	870	3.5	<2	0.48	2.5	2	6	1	0.56	5.46	0.12	1965	3	0.21	2	100	152	84	0.04	7	<10	1275
MOOH131	Erdenet West	Tsookher mert	Quartz mass		malachite, unknown gray minerals	1.150	331	420.0	1820	634.0	0.83	70	<0.5	134	0.03	71.5	<1	13	2210	0.17	0.33	0.03	15	4	0.03	1	90	26100	36	<0.01	3	<10	548
MOOH132	Erdenet West	Tsookher mert	Quartz vein			285.400	291	220.0	1640	950.0	2.74	280	0.5	34	0.08	21.5	2	<1	624	0.45	1.49	0.13	65	4	0.39	3	140	89900	52	0.04	12	<10	1010
MOOH133	Erdenet West	Tsookher mert	Quartz vein			0.015	6	2.6	<10	4.2	3.71	60	0.5	<2	0.32	<0.5	1	9	15	0.47	0.85	0.09	170	<1	1.59	3	160	170	97	0.07	14	<10	38
MOOH137	Erdenet West	Oyuut khonkhor	Gossan			0.135	114	2.4	120	7.8	6.61	580	0.5	<2	0.01	<0.5	1	5	8	0.56	2.71	0.01	15	3	0.30	<1	180	790	111	0.03	10	<10	2
MOOH138	Erdenet West	Oyuut khonkhor	Quartz vein			0.450	21	0.6	<10	10.2	3.48	240	2.0	52	0.41	<0.5	3	10	10	0.77	0.97	0.59	80	18	0.27	5	600	1980	82	0.06	27	<10	30

Phase II survey

Table A-15 Geochemical grade assay results of rock samples

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%
MO0H141	Erdenet West	Tsagaan chuluut East	Altered rock	limonitization, silicification, unknown alteration		0.010	7	0.6	<10	<0.2	8.78	820	0.5	<2	0.01	<0.5	1	5	8	0.58	2.77	0.01	15	2	0.31	1	180	24	118	0.03	10	<10	2
MO0H142	Erdenet West	Tsagaan chuluut East	Silicified rock	limonitization, silicification, unknown alteration		0.010	14	0.2	<10	<0.2	8.11	720	1.5	2	0.20	<0.5	<1	8	4	0.37	2.53	0.01	20	3	0.27	5	220	48	191	0.05	13	<10	<2
MO0H156	Erdenet West	Talbulag	Altered porphyritic rock			<0.005	10	1.4	90	<0.2	9.21	280	<0.5	<2	0.05	<0.5	10	19	19	1.72	0.06	<0.01	5	<1	0.04	8	690	20	1260	0.45	110	<10	<2
MO0H157	Erdenet West	Talbulag	Silicified rock			<0.005	44	5.8	480	0.8	0.84	620	<0.5	8	0.06	<0.5	4	21	16	2.78	0.16	0.01	30	21	0.05	3	710	94	1065	0.45	32	<10	4
MO0HH101	Tariat	Solongot	skarn		pyroxine, hedenbergite	<0.005	<1	<0.2	<10	<0.2	5.00	260	1.5	<2	17.05	<0.5	10	19	26	1.89	0.57	10.75	530	3	0.44	1	530	28	296	0.25	45	<10	212
MO0HH103	Tosontsen gel	Zost uul	Quartz porphyry	white, sericite?		<0.005	5	0.2	<10	0.2	8.38	1580	1.0	<2	0.28	<0.5	2	6	121	0.74	4.81	0.22	155	8	2.55	4	190	42	478	0.10	12	<10	58
MO0HH105	Tosontsen gel	Zost uul	qz with py. (black crystal)		qz with py	<0.005	8	0.2	<10	<0.2	5.52	920	0.5	<2	0.24	<0.5	2	7	57	1.33	2.80	0.09	25	197	1.35	1	100	26	171	0.04	11	<10	14
MO0HH106	Tosontsen gel	Naranbulag	Granite, syenite		malachite along fracture (granite), qz vein (syenite)	<0.005	<1	0.2	<10	<0.2	7.57	130	1.0	<2	0.36	<0.5	3	5	858	0.83	0.86	0.50	155	<1	5.06	<1	300	18	141	0.12	29	<10	48
MO0HH108	Tosontsen gel	Naranbulag	Granitic rock	whitish	malachite, azurite	0.010	50	10.0	570	0.6	4.85	270	1.5	8	0.68	<0.5	51	4	24800	3.10	0.58	0.15	1305	162	1.78	4	720	62	145	0.03	13	10	76
MO0HH112	Tosontsen gel	Davaa	syenite	qz vein, epidote		<0.005	<1	<0.2	<10	<0.2	5.56	590	1.5	<2	0.39	<0.5	1	6	102	0.68	2.93	0.14	325	2	2.67	3	160	14	111	0.11	9	<10	28
MO0HH113	Tosontsen gel	Davaa	silicified rock	silicification		<0.005	5	<0.2	<10	<0.2	1.24	160	0.5	<2	0.74	<0.5	2	16	13	0.48	0.64	0.16	245	<1	0.30	3	90	<2	74	0.05	12	<10	16
MO0HH114	Tosontsen gel	Quartzite	Altered rock with quartz	white with black qz?		<0.005	<1	<0.2	<10	0.2	5.09	180	3.5	<2	0.11	<0.5	1	18	68	0.84	2.94	0.08	105	8	1.59	4	130	18	80	0.14	13	<10	10
MO0HH115	Tosontsen gel	Quartzite	silicified rock	silicification		<0.005	13	<0.2	<10	<0.2	6.92	30	3.5	<2	0.06	<0.5	<1	4	4	0.30	2.98	0.15	75	8	3.63	<1	60	30	48	0.14	11	<10	8
MO0HH116	Tosontsen gel	Quartzite	silicified rock	silicification		<0.005	<1	<0.2	<10	<0.2	3.79	30	0.5	<2	0.06	<0.5	<1	5	3	0.17	1.60	0.03	50	17	0.09	<1	40	8	22	0.05	8	<10	<2
MO0HH118	Tsagaan uul	Gurven buudal uul	qz with mica			<0.005	11	<0.2	<10	0.2	7.76	30	24.0	<2	0.43	<0.5	2	2	5	1.06	0.85	0.03	5020	<1	5.12	<1	40	36	26	0.01	<1	<10	46
MO0HH124	Tsagaan uul	Tsagaan uul	schist	silicification	py	<0.005	232	2.8	<10	<0.2	7.88	880	16.5	<2	0.21	<0.5	22	64	28	3.19	3.48	0.96	1400	1	0.17	85	330	6	240	0.29	83	<10	64
MO0HH127	Tsagaan uul	Deed ulaan tolgoi	Quartz vein in granite			<0.005	5	<0.2	30	<0.2	4.13	50	3.0	<2	0.04	<0.5	<1	11	2	0.16	2.25	0.02	45	3	1.72	4	60	14	14	0.01	3	<10	14
MO0HH129	Tsagaan uul	Deed ulaan tolgoi	Breccia (quartz, feldite)		py	<0.005	16	0.2	<10	<0.2	3.92	160	1.5	<2	0.06	<0.5	<1	11	2	0.06	2.99	0.02	15	11	1.42	3	130	6	47	0.01	2	<10	2
MO0HH136	Murun West	Ulaannuur	Grano-syenite with pyrite		py	<0.005	10	<0.2	<10	0.2	7.05	80	2.5	<2	0.04	<0.5	<1	8	1	1.38	3.18	0.43	80	4	0.22	<1	80	6	7	0.08	20	10	14

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%
MO0HH137	Murun West	Ulaannuur	silicified rock	silicification		<0.005	15	<0.2	<10	0.6	3.17	60	0.5	<2	0.03	<0.5	<1	9	5	0.38	1.85	0.03	25	2	1.36	<1	10	10	13	0.04	24	<10	6
MO0HH141	Erdenet West	Bulgan NW (Eastern part)	silicified andesite (or diorite)	silicification	---	<0.005	2	<0.2	<10	<0.2	8.29	1110	1.5	<2	2.17	<0.5	11	6	17	3.28	2.10	0.31	1410	<1	4.11	3	1350	28	685	0.51	55	<10	54
MO0HH142	Erdenet West	Bulgan NW (Eastern part)	silicified rock	silicification	(py)	0.015	45	1.2	10	<0.2	7.64	1020	1.5	2	0.93	<0.5	6	33	20	1.63	2.45	0.32	450	3	4.24	3	480	18	288	0.33	21	<10	60
MO0HH143	Erdenet West	Burged Khyr	Granite	---	---	0.005	6	<0.2	<10	<0.2	8.62	1020	2.0	<2	2.06	<0.5	11	23	18	2.39	3.54	0.14	370	1	4.26	15	850	28	570	0.22	60	<10	80
MO0HH144	Erdenet West	Burged Khyr	silicified rock	silicification	---	<0.005	8	<0.2	<10	0.2	7.84	320	3.0	<2	0.02	<0.5	1	9	10	0.96	3.94	0.23	135	<1	0.15	<1	40	18	38	0.10	10	<10	32
MO0HH148	Erdenet West	Danbatseren	silicified rock	silicification		<0.005	28	<0.2	<10	<0.2	0.45	30	<0.5	<2	0.01	<0.5	1	10	26	1.03	0.10	0.06	10	3	0.05	<1	80	<2	26	0.11	11	<10	6
MO0HH149	Erdenet West	Danbatseren	silicified rock	silicification		<0.005	39	0.6	<10	<0.2	0.73	70	<0.5	<2	0.01	<0.5	1	12	83	4.81	0.03	0.14	20	12	0.07	3	560	2	17	0.14	30	<10	8
MO0HH150	Erdenet West	Danbatseren	silicified rock	silicification		0.005	43	<0.2	40	<0.2	0.14	580	<0.5	<2	0.02	<0.5	1	15	41	1.09	<0.01	0.01	5	6	0.01	1	190	6	19	0.11	5	<10	2
MO0HH151	Erdenet West	Danbatseren	silicified rock	silicification		<0.005	3	<0.2	<10	<0.2	0.17	40	<0.5	<2	<0.01	<0.5	1	9	32	1.79	0.04	<0.01	5	6	<0.01	1	90	2	28	0.11	4	<10	2
MO0HH152	Erdenet West	Danbatseren	silicified rock	silicification		<0.005	3	<0.2	<10	<0.2	0.06	100	<0.5	<2	<0.01	<0.5	<1	12	32	0.32	0.01	<0.01	<5	2	<0.01	<1	10	<2	13	0.09	1	<10	<2
MO0HH153	Erdenet West	Danbatseren	silicified rock	silicification, limonite(surface reddish)		<0.005	9	0.2	<10	<0.2	0.25	70	<0.5	<2	<0.01	<0.5	2	15	25	1.42	0.04	0.03	10	5	<0.01	1	60	2	15	0.25	12	<10	2
MO0HH154	Erdenet West	Danbatseren	silicified rock	silicification		0.050	29	<0.2	60	0.2	0.05	<10	<0.5	<2	<0.01	<0.5	<1	16	20	0.78	<0.01	<0.01	5	<1	<0.01	<1	70	6	13	0.27	23	<10	4
MO0HH155	Erdenet West	Danbatseren	silicified rock	silicification (weak)		<0.005	5	0.2	<10	<0.2	0.51	30	<0.5	2	0.03	<0.5	1	11	26	1.38	0.02	0.13	35	16	0.06	1	170	16	62	0.22	30	<10	10
MO0HH156	Erdenet West	Danbatseren	silicified rock	silicification (weak)		<0.005	10	0.2	<10	<0.2	0.20	40	<0.5	<2	0.22	<0.5	<1	12	24	2.79	0.05	0.01	30	13	<0.01	1	580	36	37	0.14	15	<10	14
MO0HH157	Erdenet West	Danbatseren	silicified rock	silicification		<0.005	46	0.2	10	<0.2	0.09	1010	<0.5	<2	<0.01	<0.5	<1	12	38	1.15	0.01	<0.01	5	21	<0.01	<1	100	6	13	0.11	4	<10	2
MO0HH158	Erdenet West	Danbatseren	silicified rock	silicification		<0.005	19	<0.2	<10	<0.2	0.15	850	<0.5	<2	<0.01	<0.5	1	13	25	0.72	<0.01	0.03	<5	10	0.01	3	60	<2	12	0.10	4	<10	6
MO0HH159	Erdenet West	Danbatseren	Altered rock	argilization (whitish)		<0.005	21	0.2	<10	<0.2	9.30	700	0.5	<2	0.08	<0.5	1	32	18	0.46	1.38	0.05	5	1	0.33	<1	270	12	428	0.16	129	<10	6
MO0HH160	Erdenet West	Danbatseren	silicified rock	silicification		0.010	147	0.6	10	<0.2	0.07	130	<0.5	4	0.05	<0.5	1	8	28	3.52	0.26	<0.01	10	7	0.04	1	850	58	140	0.11	7	<10	8
MO0HH161	Erdenet West	Danbatseren	silicified rock	silicification		<0.005	18	<0.2	<10	0.2	1.94	160	0.5	<2	0.02	<0.5	2	19	22	1.43	0.01	0.51	5	8	0.19	5	170	2	45	0.12	22	<10	10

Phase II survey

Table A-15 Geochemical grade assay results of rock samples

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%
MO0HH162	Bulgan SW	Oyuut khonkhor	silicified rock	silicification		<0.005	35	16.0	70	2.4	7.96	1190	1.5	<2	0.17	<0.5	6	23	112	2.66	3.56	0.34	70	6	0.27	15	640	40	111	0.22	91	<10	152
MO0HH163	Bulgan SW	Oyuut khonkhor	Tuff Breccia	argilization (whitish)		0.005	23	1.0	<10	0.6	9.19	470	1.5	<2	0.45	<0.5	8	18	15	3.28	1.94	0.50	155	1	3.06	10	1650	96	419	0.21	90	<10	138
MO0HH164	Bulgan SW	Oyuut khonkhor	silicified rock	silicification		0.015	212	3.6	280	0.8	2.64	1500	2.5	2	0.36	<0.5	61	21	38	4.34	0.07	0.72	7500	14	0.31	27	1140	52	436	0.13	87	<10	144
MO0HH165	Bulgan SW	Oyuut khonkhor	silicified rock with limonite	silicification with limonite		0.005	90	2.8	<10	1.8	3.57	190	1.5	10	0.19	<0.5	13	29	191	4.70	0.05	0.99	685	5	0.34	18	1030	118	387	0.32	75	<10	70
MO0HH166	Bulgan SW	Oyuut khonkhor	Andesite	(vein of pink minerals)		<0.005	47	1.0	<10	<0.2	9.37	1300	2.5	4	2.78	<0.5	26	53	66	6.11	2.33	2.08	850	<1	3.99	36	4590	28	1045	0.78	170	<10	104
MO0HH167	Bulgan SW	Oyuut khonkhor	silicified rock (weakly)	weak silicification		0.010	97	1.4	180	0.6	6.14	810	2.5	<2	0.96	<0.5	29	42	59	6.50	0.70	0.96	590	<1	1.63	28	3740	36	732	0.30	130	<10	128
MO0HH171	Tavt	Ereen No.42 ore body	Quartz			0.040	<1	0.8	<10	0.6	0.36	10	<0.5	<2	0.34	<0.5	2	10	99	0.48	0.01	0.06	55	11	0.01	3	30	10	149	<0.01	7	<10	20
MO0HH172	Tavt	Ereen No.42 ore body	Altered rock	(alteration)	malachite	0.230	<1	1.6	<10	3.6	10.80	3600	1.5	8	1.95	<0.5	18	50	2600	3.11	8.41	1.82	615	<1	0.26	42	1430	28	831	0.43	146	<10	120
MO0HH174	Tavt	Ereen No.3 ore body, column No.2	Ore		malachite, sulfide mineral	3.540	16	1.6	40	76.0	0.09	90	<0.5	116	0.02	0.5	1	<1	131500	12.45	0.02	0.01	15	245	<0.01	6	2390	38	17	<0.01	3	90	142
MO0HH177	Tavt	Teshig No.2	Magnetite skarn		magnetite	0.050	1	0.2	<10	0.6	10.10	900	<0.5	2	0.94	<0.5	60	11	1550	15.15	2.84	2.36	1845	<1	0.43	15	960	6	94	0.70	247	<10	132
MO0HH178	Zelter	Occurrence 24	Lappili tuff (or granitic rock)	weak silicification?		0.010	2	24.0	10	0.6	8.74	660	2.0	<2	0.20	<0.5	6	8	255	1.99	3.41	0.17	240	2	3.99	5	740	22	242	0.26	46	<10	184
MO0HH181	Erdenet West	Tsagaan chuluut East	silicified rock	silicification	---	<0.005	7	0.8	<10	<0.2	5.61	510	0.5	<2	0.02	<0.5	2	8	73	0.62	2.15	0.01	30	1	0.36	<1	220	24	210	0.05	9	<10	4
MO0HH182	Erdenet West	Tsagaan chuluut East	silicified rock	silicification	---	<0.005	3	0.4	<10	0.2	7.26	620	0.5	2	0.03	<0.5	1	17	17	0.09	2.55	0.01	5	1	0.54	<1	390	44	418	0.02	16	<10	2
MO0HH183	Erdenet West	Tsagaan chuluut East	silicified rock	silicification	---	<0.005	8	0.6	<10	0.2	6.81	400	0.5	<2	0.03	<0.5	1	9	9	0.65	2.51	<0.01	15	<1	0.52	<1	350	44	233	0.07	13	<10	<2
MO0HH184	Erdenet West	Tsagaan chuluut East	silicified rock	silicification	---	<0.005	31	0.8	<10	0.2	7.37	930	0.5	<2	0.03	<0.5	2	6	21	1.56	2.67	0.01	15	3	0.50	<1	710	114	523	0.09	12	<10	10
MO0HH185	Erdenet West	Tsagaan chuluut East	silicified rock	silicification	---	<0.005	13	0.8	<10	0.4	5.49	570	1.0	<2	0.16	<0.5	<1	6	14	0.49	2.16	0.03	30	<1	0.36	<1	140	70	172	0.04	9	<10	2
MO0HH190	Erdenet West	Tsagaan chuluut North	Breccia of silicified rock	silicification	---	<0.005	<1	1.0	<10	<0.2	7.51	730	<0.5	<2	0.14	<0.5	2	46	13	0.18	1.57	0.02	20	1	1.16	<1	1450	44	912	0.20	112	<10	<2
MO0HH195	Erdenet West	Tsagaan chuluut North	silicified rock	silicification (source rock: dacitic tuff?)	---	<0.005	9	0.2	<10	<0.2	0.35	50	<0.5	<2	0.01	<0.5	<1	26	62	0.43	0.06	0.01	30	3	0.01	3	120	<2	43	0.23	8	<10	8
MO0HH198	Erdenet West	Tsagaan chuluut NE	silicified (altered) rock	silicification & argilisation?	---	<0.005	<1	0.2	50	<0.2	7.69	1040	<0.5	<2	0.11	<0.5	2	145	11	0.19	0.89	<0.01	5	1	0.44	<1	1450	18	1225	0.60	124	<10	6

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Ba	Be	Bi	Ce	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%
MO0HH197	Erdenet West	Mogoin gol South	silicified rock	silicification with limonite & muscovite	---	<0.005	11	0.2	<10	<0.2	7.68	380	<0.5	<2	0.10	<0.5	1	12	11	1.89	0.34	0.01	<5	3	0.14	<1	360	<2	123	0.08	44	<10	<2
MO0HH198	Erdenet West	Mogoin gol South	Altered rock	silicification & argillisation with muscovite	azurite	<0.005	10	0.2	<10	0.2	7.10	1380	0.5	<2	0.03	<0.5	<1	10	6	0.40	0.18	0.04	10	4	0.12	<1	1900	20	1035	0.05	53	<10	8
MO0HH200	Erdenet West	Mogoin gol South	Altered rock	iqz and whitish clay mineral	(azurite, rare)	<0.005	8	<0.2	<10	<0.2	6.11	50	<0.5	<2	0.08	<0.5	1	13	10	1.01	0.08	<0.01	<5	3	0.12	<1	1210	2	401	0.15	83	<10	<2
MO0HH202	Erdenet West	Khuginin gol	Quartz vein	---	malachite	<0.005	30	31.0	<10	2.2	0.38	10	<0.5	2	0.02	<0.5	1	13	818	0.23	0.09	0.02	15	2	0.03	1	40	72	20	<0.01	8	<10	26
MO0HH204	Erdenet West	Zhuukhiin gol	silicified rock	silicification	---	<0.005	17	0.8	<10	<0.2	7.49	1050	1.5	<2	0.53	<0.5	2	8	19	0.62	3.69	0.15	190	<1	2.72	<1	270	48	592	0.07	11	<10	28
MO0MZ100	Tariat	Terkhiin tsagaan nuur	Quartz vein			0.240	11	4.4	<10	0.2	0.14	10	0.5	94	0.01	<0.5	<1	11	4	0.09	0.05	<0.01	50	5	0.01	<1	<10	<2	14	<0.01	<1	220	66
MO0MZ101	Tariat	Terkhiin tsagaan nuur	Quartz vein		Wolframite?	<0.005	91	2.4	<10	0.2	0.22	10	113.0	2	0.01	<0.5	1	8	5	1.00	0.01	0.01	2530	4	0.01	<1	<10	<2	9	<0.01	1	540	22
MO0MZ102	Tariat	Solongotin gol	Skarn		Pyrite	<0.005	12	0.4	<10	0.2	8.29	460	1.5	2	7.07	<0.5	24	30	114	4.09	0.60	8.14	530	3	2.76	12	1440	18	583	0.80	181	150	58
MO0MZ104	Tosontsen gel	Khuurai sair	Felsite		Quartz veinlets, malachite	<0.005	22	<0.2	<10	0.8	6.77	1070	1.5	<2	0.45	<0.5	1	7	1120	0.45	2.62	0.12	120	10	3.53	1	130	148	214	0.11	12	30	46
MO0MZ105	Tosontsen gel	Khuurai sair	Felsite		Malachite	0.030	8	<0.2	40	20.8	4.25	50	0.5	8	1.88	4.0	4	17	8090	1.63	0.30	0.27	450	118	1.74	4	240	11700	435	0.07	42	10	376
MO0MZ106	Tosontsen gel	Zost uul	Altered rock	Sil/arg	Quartz veinlets	<0.005	9	<0.2	<10	0.2	7.71	870	0.5	<2	0.10	<0.5	1	35	106	2.70	5.02	0.23	100	43	1.53	1	570	66	221	0.25	57	<10	20
MO0MZ107	Tosontsen gel	Zost uul	Altered rock	Sil/arg	Limonite, jarosite	<0.005	14	<0.2	<10	0.2	6.59	1260	1.0	<2	0.32	<0.5	5	5	175	2.05	4.18	0.14	80	431	2.05	3	630	18	250	0.10	35	<10	22
MO0MZ108	Tosontsen gel	Zost uul	Altered rock	Sil	Pyrite, limonite	<0.005	9	<0.2	<10	<0.2	5.45	1060	0.5	<2	0.14	<0.5	1	5	37	1.04	3.67	0.09	20	30	1.13	<1	90	16	126	0.03	23	<10	12
MO0MZ109	Tosontsen gel	Naranbulag	Granite		Malachite	<0.005	15	0.2	<10	<0.2	7.73	170	1.0	<2	0.46	<0.5	4	8	880	0.80	0.82	0.55	205	<1	4.94	<1	320	14	152	0.12	29	<10	46
MO0MZ110	Tosontsen gel	Naranbulag	Aplite		Limonite	<0.005	14	2.2	<10	0.6	5.85	1760	<0.5	<2	0.31	<0.5	1	7	121	0.39	2.88	0.07	35	3	2.44	<1	190	30	251	0.01	7	<10	6
MO0MZ114	Tosontsen gel	Occurrence 124-B-4.5	Gabbro			<0.005	3	<0.2	10	<0.2	13.65	260	<0.5	<2	9.17	<0.5	36	9	295	3.82	1.33	3.57	815	1	1.13	50	40	8	640	0.07	40	<10	44
MO0MZ115	Tosontsen gel	Davaa	Altered rock	Sil	Quartz veinlets	<0.005	14	<0.2	<10	<0.2	1.09	110	0.5	<2	0.18	<0.5	1	11	28	0.40	0.49	0.13	120	<1	0.20	1	100	<2	49	0.05	11	<10	8
MO0MZ116	Tosontsen gel	Quartzite	Rhyolite		Limonite, jarosite	<0.005	17	0.2	<10	<0.2	6.78	80	1.5	<2	0.06	<0.5	<1	3	10	0.92	3.34	0.03	50	11	3.30	<1	80	58	41	0.17	6	<10	16
MO0MZ118	Tsagaan uul	Gurvan buudal uul	Quartz vein		Limonitic	<0.005	<1	0.2	<10	<0.2	5.26	190	0.5	<2	0.36	<0.5	2	5	10	0.83	0.57	0.17	410	<1	3.22	<1	300	6	178	0.15	10	<10	60

Table A-15 Geochemical grade assay results of rock samples

Phase II survey

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Ba	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%
MOOMZ120	Tsagaan uul	Gurvan buudal uul	Quartz vein		Fe hydroxide	<0.005	20	0.6	<10	<0.2	0.13	10	<0.5	<2	0.17	<0.5	<1	8	8	0.05	0.05	<0.01	80	<1	0.03	<1	10	<2	29	<0.01	<1	<10	2
MOOMZ121	Tsagaan uul	Khunkh tsakhir	Altered rock	Qz-muscovite		<0.005	10	0.6	<10	8.0	3.88	30	2.5	6	0.49	<0.5	<1	4	38	1.28	1.81	0.01	1305	3	0.05	<1	10	888	19	0.02	<1	60	86
MOOMZ122	Tsagaan uul	Khunkh tsakhir	Altered rock	Qz-muscovite	Malachite	<0.005	32	0.2	10	3.8	6.39	40	4.5	12	0.18	2.0	2	3	1780	2.48	2.83	0.01	1245	4	0.13	<1	40	18	11	0.01	<1	40	398
MOOMZ123	Tsagaan uul	Tsagaan uul	Mudstone		Limonitic	0.010	200	22.0	180	2.0	0.23	70	<0.5	<2	0.02	3.0	2	65	64	0.70	0.08	0.01	30	12	0.01	37	110	10	11	<0.01	241	<10	80
MOOMZ124	Tsagaan uul	Tsagaan uul	Quartz vein		Cavities after sulfides	0.015	2	9.4	100	1.2	0.20	790	<0.5	2	1.17	<0.5	<1	126	67	0.15	0.05	0.04	35	12	0.01	18	60	<2	107	<0.01	594	<10	68
MOOMZ125	Tsagaan uul	Ulaan zavsar	Quartz vein		Slight limonitic	0.005	10	<0.2	<10	<0.2	3.80	70	<0.5	<2	0.10	<0.5	1	9	8	0.29	0.19	0.04	270	<1	2.93	1	150	<2	54	0.01	4	<10	10
MOOMZ126	Tsagaan uul	Ulaan zavsar	Siliceous rock	Altered schist?	Limonitic dots	<0.005	6	0.2	<10	0.2	5.38	220	0.5	<2	0.32	<0.5	3	10	4	1.18	0.85	0.23	490	1	2.65	6	260	8	191	0.10	20	<10	36
MOOMZ127	Tsagaan uul	Ulaan zavsar	Gneissose rock		Limonitic dots	<0.005	5	0.6	<10	<0.2	6.23	440	1.0	<2	0.72	<0.5	7	11	11	1.81	1.35	0.49	835	<1	3.01	11	340	8	157	0.20	29	<10	68
MOOMZ128	Tsagaan uul	Khaisiin belchir	Palitic schist		Pyrite dissemination	0.020	31	2.6	170	0.4	5.99	250	1.0	<2	0.26	0.5	12	71	54	2.48	1.57	0.19	50	12	1.30	35	440	20	95	0.19	211	<10	32
MOOMZ129	Murun west	Ulaannuur	Greisen	Qz-muscovite	Limonite and cavities	<0.005	4	0.2	<10	0.2	7.43	90	4.5	<2	0.01	<0.5	<1	14	3	0.52	4.21	0.95	125	42	0.20	<1	20	2	13	0.07	52	20	8
MOOMZ133	Erdnet West	Bulgan NW (Eastern part)	Sil. rock	Silicification		<0.005	6	0.2	<10	<0.2	6.29	800	2.0	<2	0.16	<0.5	<1	6	2	0.50	4.68	0.16	255	<1	0.81	<1	200	10	111	0.15	10	<10	10
MOOMZ134	Erdnet West	Bulgan NW (Eastern part)	Sil. rock	Silicification	Pyrite dissemination	<0.005	17	0.4	10	0.2	7.79	1180	1.5	2	1.18	<0.5	5	9	11	1.82	2.81	0.40	585	3	3.52	2	490	16	347	0.26	37	<10	38
MOOMZ135	Erdnet West	Burged khyr	Aplite	Altered	Limonite	<0.005	28	0.8	<10	0.2	5.69	220	1.5	<2	0.43	<0.5	3	11	52	1.42	3.24	0.05	50	1	1.79	3	100	64	77	0.03	7	<10	200
MOOMZ136	Erdnet West	Burged khyr	Granitoid	Strongly sil.	Reddish limonite	<0.005	15	0.4	<10	<0.2	7.14	60	0.5	<2	0.13	<0.5	<1	5	28	0.44	0.38	0.01	60	1	5.77	<1	120	12	123	0.05	7	<10	24
MOOMZ139	Erdnet West	Burged khyr	Syanite	Argillized		<0.005	22	<0.2	<10	<0.2	6.92	220	2.5	<2	0.02	<0.5	1	7	11	0.73	3.09	0.25	140	<1	0.20	1	60	16	40	0.09	13	<10	32
MOOMZ141	Erdnet West	Burged khyr	Granitoid	Sil/arg		0.010	5	0.8	<10	<0.2	6.98	260	2.5	<2	0.23	<0.5	1	4	12	0.52	3.59	0.14	50	1	1.31	<1	80	32	65	0.06	10	<10	20
MOOMZ142	Erdnet West	Burged khyr	Granite		Limonite	<0.005	123	1.6	50	1.2	6.31	320	3.0	<2	0.09	0.5	6	4	26	3.23	2.98	0.03	115	45	1.90	5	210	54	99	0.06	15	<10	220
MOOMZ143	Erdnet West	Tsookher mert	Quartz vein			0.070	3	0.4	<10	0.2	3.33	20	0.5	<2	0.11	<0.5	<1	10	3	0.22	0.61	0.07	55	1	1.74	<1	90	12	30	0.09	13	<10	78
MOOMZ144	Erdnet West	Tsookher mert	Quartz veinlets			0.010	<1	0.2	<10	0.2	4.83	430	0.5	<2	0.14	<0.5	3	8	10	0.57	2.15	0.11	360	1	1.85	3	290	124	67	0.08	16	<10	154

Table A-15 Geochemical grade assay results of rock samples

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Phase II survey

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%
MOOMZ146	Bulgan SW	Oyuut khonkhor	Volcanic rock	Silicification	Limonite	0.005	58	1.4	30	0.8	8.88	1350	2.5	<2	1.12	<0.5	35	28	56	5.03	2.17	0.35	4490	4	3.09	19	3550	58	605	0.28	111	<10	82
MOOMZ147	Bulgan SW	Oyuut khonkhor	Volcanic rock	Silicification	Limonite	0.015	66	2.0	250	1.4	9.12	1310	2.0	<2	0.35	<0.5	4	47	20	4.77	3.30	0.40	90	3	2.48	8	2280	28	774	0.27	124	<10	58
MOOMZ148	Bulgan SW	Oyuut khonkhor	Volcanic rock	Silicification	Limonite	<0.005	19	1.0	30	0.6	8.27	590	2.0	<2	0.35	<0.5	5	39	28	4.52	1.76	0.34	55	6	3.78	7	2150	238	378	0.15	109	<10	172
MOOMZ180	Zelter	Gatsuunkhan	Granite			<0.005	3	3.4	<10	0.2	6.55	110	1.5	<2	0.15	<0.5	4	1	45	2.52	2.48	0.07	830	14	3.42	5	490	46	44	0.21	9	<10	84
MOOMZ181	Zelter	Gatsuunkhan	Porphyry dacite	Silicification	Limonite	<0.005	15	1.4	<10	<0.2	7.54	450	1.0	<2	3.07	<0.5	14	35	19	3.01	2.25	0.88	780	4	3.58	10	890	22	525	0.29	70	<10	60
MOOMZ164	Erdnet West	Tsagaan chuluut East	Altered rock	Silicification		<0.005	12	1.0	<10	<0.2	7.98	310	0.5	<2	0.04	<0.5	<1	5	6	0.31	0.12	0.01	15	5	0.17	<1	200	18	306	0.07	13	<10	<2
MOOMZ165	Erdnet West	Tsagaan chuluut East	Altered rock	Silicification		0.100	40	1.2	<10	<0.2	6.65	560	0.5	<2	0.06	<0.5	2	6	10	2.43	2.09	0.01	20	3	0.36	<1	350	46	203	0.08	12	<10	2
MOOMZ167	Erdnet West	Tsagaan chuluut West	Altered rock	Silicification		<0.005	<1	0.2	<10	<0.2	7.17	300	1.5	<2	0.06	<0.5	<1	1	1	0.64	3.00	0.38	25	<1	0.14	<1	40	12	42	0.12	8	<10	54
MOOMZ168	Erdnet West	Talbulag South	Altered rock	Silicification		<0.005	19	0.2	<10	<0.2	1.30	190	<0.5	<2	0.03	<0.5	<1	17	9	0.13	0.27	<0.01	10	3	0.06	<1	140	6	152	0.52	18	<10	2
MOOMZ169	Erdnet West	Talbulag South	Altered rock	Silicification		<0.005	13	<0.2	<10	<0.2	2.89	1020	<0.5	<2	0.03	<0.5	<1	14	16	0.09	0.29	0.02	<5	1	0.04	<1	170	14	135	0.52	20	<10	<2
MOOMZ171	Erdnet West	Mogoin gol North	Altered rock	Silicification		<0.005	5	<0.2	<10	0.2	6.70	450	<0.5	<2	0.06	<0.5	<1	30	1	0.13	1.06	<0.01	<5	2	0.88	<1	640	168	611	0.11	69	<10	<2
MOOMZ172	Erdnet West	Mogoin gol North	Altered rock	Silicification		<0.005	5	0.4	<10	<0.2	9.84	930	<0.5	2	0.07	<0.5	<1	24	<1	0.07	1.93	<0.01	5	2	1.45	<1	1020	162	541	0.15	72	<10	<2
MOOMZ173	Erdnet West	Mogoin gol North	Altered rock	Silicification		<0.005	7	0.6	10	<0.2	0.12	370	<0.5	<2	<0.01	<0.5	<1	10	14	0.11	0.04	<0.01	<5	5	<0.01	1	60	6	29	0.18	3	<10	<2
MOOMZ178	Erdnet West	Khujiriin gol North	Altered rock	Sil/Arg		<0.005	<1	0.2	<10	<0.2	11.10	860	2.5	<2	0.40	<0.5	<1	5	9	0.58	2.68	0.09	10	2	1.31	<1	280	54	920	0.50	165	<10	2
MOOMZ179	Erdnet West	Khujiriin gol North	Altered rock	Silicification	Azurite	<0.005	3	0.2	<10	<0.2	10.20	370	<0.5	<2	0.10	<0.5	2	16	2	6.68	0.47	0.03	5	1	0.59	<1	1120	16	625	0.40	210	<10	<2
MOOMZ180	Erdnet West	Khujiriin gol North	Altered rock	Silicification	Fine pyrite diss.	<0.005	14	0.2	<10	<0.2	8.40	590	1.5	<2	2.19	<0.5	11	6	14	3.45	2.07	0.27	270	4	0.84	<1	1440	14	276	0.57	100	<10	14
MOOMZ183	Erdnet West	Talbulag	Altered rock	Silicification		<0.005	9	0.2	<10	0.2	7.38	1120	1.5	<2	0.49	<0.5	1	5	12	0.64	4.34	0.14	135	<1	2.78	<1	80	28	305	0.09	8	<10	24
MOOMZ184	Erdnet West	Talbulag	Altered rock	Silicification		<0.005	1	0.2	<10	<0.2	5.00	460	<0.5	<2	0.01	<0.5	<1	32	3	0.25	0.77	<0.01	<5	2	0.51	<1	380	10	494	0.25	50	<10	<2
MOOMZ185	Erdnet West	Talbulag East	Altered rock	Silicification		<0.005	42	8.4	610	1.2	2.37	1850	<0.5	2	0.03	<0.5	1	18	12	1.51	0.09	<0.01	5	4	0.04	<1	510	20	610	0.28	50	<10	<2

Phase II survey

Table A-15 Geochemical grade assay results of rock samples

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Be	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%
MO0MZ186	Erdenet West	Taibulag East	Altered rock	Silicification		<0.005	7	0.2	<10	<0.2	9.29	950	<0.5	4	0.13	<0.5	<1	31	8	0.10	1.41	<0.01	<5	3	1.07	<1	1280	32	815	0.56	100	<10	<2
MO0TM100	Tariat	Terkhin tsagaan nuur	Quartz vein	---	Wolframite?	<0.005	1	0.8	<10	<0.2	0.12	10	0.5	4	0.01	0.5	<1	9	2	0.03	0.04	<0.01	25	2	0.01	1	10	<2	11	<0.01	<1	<10	<2
MO0TM102	Tariat	Tariatiin gol	Anorthosite	---	---	<0.005	8	0.2	<10	<0.2	14.30	1620	<0.5	<2	5.06	<0.5	3	4	<1	0.66	1.80	0.15	80	3	4.33	<1	450	6	1495	0.09	4	<10	6
MO0TM103	Tariat	Tariatiin gol	Quartz vein or mass?	---	---	0.005	<1	<0.2	10	<0.2	0.08	30	<0.5	<2	0.03	<0.5	<1	15	2	0.02	0.05	<0.01	<5	1	0.03	1	10	<2	8	<0.01	<1	<10	<2
MO0TM104	Murun West	Tsagaan tolgoi	Quartz mass?	Limonitization	Blackish mineral (rutile?)	<0.005	4	1.0	<10	0.2	0.14	80	<0.5	<2	0.04	<0.5	<1	14	7	0.40	0.07	0.01	35	36	0.01	1	120	40	49	<0.01	1	<10	4
MO0TM105	Murun West	Tsagaan tolgoi	Granite	greisenization (muscovite), limonitization	---	<0.005	2	0.4	10	0.2	7.54	1210	1.5	<2	0.21	<0.5	1	9	10	2.19	6.62	0.25	35	1325	0.85	<1	880	74	178	0.05	18	<10	24
MO0TM106	Murun West	Tsagaan tolgoi	Granite	---	---	<0.005	<1	0.2	<10	<0.2	7.64	1150	2.0	<2	0.87	<0.5	2	8	<1	0.86	4.14	0.06	45	29	2.53	<1	40	24	466	0.17	23	<10	16
MO0TM107	Murun West	Tsagaan tolgoi	Quartz pophyry?	greisenization (muscovite), limonitization	---	<0.005	8	1.6	10	0.8	6.52	570	2.0	4	0.55	<0.5	<1	3	8	1.13	3.53	0.06	75	384	0.15	<1	70	692	50	0.03	1	<10	34
MO0TM112	Erdenet West	Bulgan NW (Eastern part)	Quartz vein	---	---	0.140	5	0.2	<10	0.2	9.76	<10	0.5	<2	14.40	<0.5	4	20	16	0.92	0.06	0.24	325	4	0.34	4	130	12	48	0.07	100	<10	6
MO0TM113	Erdenet West	Undrah	Aplitic Granite	White argillization, weak silicification, weak limonitization	---	<0.005	11	<0.2	50	0.6	4.12	80	0.5	<2	1.99	<0.5	1	7	493	0.22	0.96	0.22	155	5	1.55	1	40	12	166	0.01	5	<10	6
MO0TM114	Erdenet West	Tsookher mert	Quartz vein	---	---	<0.005	4	0.2	<10	<0.2	2.13	40	<0.5	<2	0.06	<0.5	<1	19	5	0.21	0.55	0.06	80	3	0.82	5	70	16	20	0.05	9	<10	96
MO0TM116	Erdenet West	Tsookher mert	Granitic rock	Silicification (fine grain quartz)	---	<0.005	<1	0.2	<10	<0.2	6.68	1510	1.5	<2	0.57	<0.5	1	12	3	0.97	3.44	0.10	255	3	2.78	4	1360	18	191	0.13	7	<10	88
MO0TM117	Erdenet West	Tsookher mert	Granitic rock	Silicification (fine grain quartz), white argillization	---	0.020	11	0.2	<10	2.0	10.25	570	1.0	<2	1.56	0.5	4	4	12	1.78	2.33	0.12	410	5	5.72	1	250	204	347	0.18	21	<10	158
MO0TM119	Bulgan SW	Oyuut khonkhor	Tuff breccia	Moderate Silicification, white argillization, limonitization	---	0.005	28	11.0	170	3.4	8.41	690	2.0	<2	0.40	<0.5	4	22	228	2.74	3.48	0.75	135	2	0.38	11	1400	128	730	0.24	108	<10	128
MO0TM120	Bulgan SW	Oyuut khonkhor	Tuff breccia	Moderate Silicification, partly brecciated, white argillization, strong limonitization	---	<0.005	29	1.4	60	0.8	8.10	830	2.0	<2	1.30	<0.5	6	24	57	7.04	2.12	0.69	95	2	1.89	21	1740	102	458	0.17	112	<10	142
MO0TM121	Bulgan SW	Oyuut khonkhor	Tuff breccia	Moderate Silicification, pyritization (limonite)	---	<0.005	34	0.8	40	0.6	3.96	230	1.0	<2	0.59	0.5	5	18	11	1.70	0.15	0.74	485	<1	0.74	16	1340	28	296	0.19	48	<10	68
MO0TM122	Bulgan SW	Oyuut khonkhor	Andesite	Moderate Silicification (network)	---	<0.005	12	0.8	<10	1.4	4.86	60	1.5	<2	3.64	<0.5	2	23	7	0.78	0.13	1.38	100	2	0.43	8	1000	38	397	0.26	68	<10	36

Table A-15 Geochemical grade assay results of rock samples

(11/12)

Phase II survey

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Ba	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	ppm
MOOTM124	Bulgan SW	Oyuut khonkhor	Andesite (float rock)	Silicification network, fine grain quartz like sugar, limonitization	---	0.010	121	2.4	<10	1.4	3.88	110	2.5	36	0.71	<0.5	17	39	163	8.22	0.05	1.17	495	3	0.34	28	2750	68	341	0.27	115	<10	66
MOOTM125	Bulgan SW	Oyuut khonkhor	Tuff breccia (float rock)	Silicification network, limonitization	---	<0.005	48	3.0	<10	1.2	2.38	180	1.5	10	0.17	<0.5	8	21	47	1.98	0.07	0.68	345	8	0.23	12	730	26	82	0.11	59	<10	46
MOOTM127	Tavt	Ereen No 2 ore body	Quartz vein	limonitization (pyrite)	malachite (chalcopyrite)	11.230	5	2.4	450	20.2	0.12	10	<0.5	4	0.09	<0.5	<1	20	19400	0.29	0.01	0.03	10	87	<0.01	3	400	8	18	<0.01	39	<10	<2
MOOTM130	Tavt	Ereen No 1 ore body	Quartz vein	muscovite, host: K-silicate alteration	---	0.045	15	1.0	280	0.2	3.98	1020	<0.5	<2	0.83	<0.5	5	12	200	0.91	3.80	0.30	250	7	0.15	5	190	38	426	0.05	30	<10	30
MOOTM132	Tavt	Teshig No 2	Skarn ore	epidotization, silicification, magnetite, limonitization	malachite, azurite, chalcopyrite	0.125	7	0.4	<10	1.4	8.98	140	<0.5	<2	9.20	0.5	41	4	1250	11.75	0.32	2.73	2840	<1	0.14	8	660	68	790	0.51	206	<10	206
MOOTM133	Zelter	Gatsuunkhan	Granitic rock (float rock)	Silicification, epidotization	---	<0.005	27	0.6	<10	1.6	7.43	250	1.5	<2	8.24	<0.5	10	43	22	3.79	1.79	0.48	780	2	0.92	9	660	28	2790	0.29	127	<10	22
MOOTM134	Zelter	Gatsuunkhan	Granitic rock (float rock)	Silicification, calcitization, epidotization	---	<0.005	24	1.8	<10	0.6	4.34	740	2.0	<2	8.20	<0.5	13	105	28	2.84	1.95	2.95	1100	5	0.91	51	790	152	978	0.28	86	<10	62
MOOTM135	Zelter	Gatsuunkhan	Basalt? (float rock)	Limonitization, calcitization, weak silicification	---	<0.005	25	1.2	<10	<0.2	9.05	1410	2.5	<2	3.37	<0.5	24	52	23	5.00	2.77	0.26	780	2	2.62	16	4680	18	831	0.95	139	<10	118
MOOTM136	Erdenet West	Under	Tuff breccia	Weak silicification, limonitization along crack	---	<0.005	7	<0.2	<10	0.2	6.92	680	1.5	<2	0.92	<0.5	5	6	23	1.93	2.14	0.30	605	<1	2.34	2	310	14	186	0.18	32	<10	52
MOOTM137	Erdenet West	Under	Tuff breccia (float rock)	In Quartz vein, W2 cm, limonitization	---	<0.005	21	0.2	<10	<0.2	2.29	250	<0.5	<2	0.07	<0.5	1	9	9	0.58	1.10	0.09	160	<1	0.05	1	200	8	20	0.08	16	<10	32
MOOTM138	Erdenet West	Under	Quartz vein	Host: propylitic alteration	---	0.030	10	0.4	<10	<0.2	3.66	30	<0.5	<2	3.01	<0.5	8	20	8	2.77	0.06	0.82	585	1	0.73	3	900	6	373	0.42	81	<10	28
MOOTM139	Erdenet West	Under	Tuff breccia	Quartz veinlets, epidotization	---	<0.005	<1	0.6	<10	<0.2	8.49	660	0.5	<2	3.29	<0.5	15	37	31	3.89	1.85	1.51	955	1	2.27	11	810	10	420	0.46	112	<10	76
MOOTM140	Erdenet West	Under	White altered rock (float rock)	Silicification, argillization	---	<0.005	16	<0.2	<10	<0.2	7.18	550	1.5	<2	0.22	<0.5	<1	7	7	0.27	2.98	0.38	60	3	0.19	<1	170	<2	21	0.11	29	<10	6
MOOTM142	Erdenet West	Under	Altered rock	Silicification, white argillization, pyrite dissemination	---	<0.005	7	<0.2	<10	<0.2	6.49	580	1.0	<2	0.04	<0.5	1	11	4	0.61	2.71	0.31	55	1	0.31	3	150	2	66	0.17	22	<10	6
MOOTM143	Erdenet West	Tsagaan chuluut East	Altered rock	Intense silicification, limonitization	---	<0.005	<1	0.2	<10	<0.2	6.63	440	<0.5	<2	0.02	<0.5	<1	13	3	0.19	2.04	<0.01	<5	3	0.37	<1	130	12	235	0.04	23	<10	<2
MOOTM145	Erdenet West	Tsagaan chuluut East	Altered rock	Silicification, intense limonitization (gossen)	---	<0.005	46	2.0	<10	<0.2	1.05	550	1.0	<2	0.08	<0.5	2	13	22	3.44	0.31	0.05	65	4	0.02	12	720	4	42	0.03	20	<10	8
MOOTM146	Erdenet West	Tsagaan chuluut East	Altered rock	Intense silicification, pyritization (limonite)	---	<0.005	7	0.6	<10	<0.2	4.13	910	0.5	<2	0.03	<0.5	<1	12	9	0.26	0.12	0.01	5	6	0.08	2	130	34	187	0.04	11	<10	<2
MOOTM149	Erdenet West	Tsagaan chuluut West	Altered rock	Intense silicification, limonitization, weak argillization?	---	<0.005	11	0.2	<10	0.6	6.53	580	<0.5	<2	0.03	<0.5	1	5	7	0.63	1.31	<0.01	20	2	0.62	<1	330	32	272	0.04	15	<10	2

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Phase II survey

Table A-15 Geochemical grade assay results of rock samples

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Sample No	District	Occurrence	Rock name	Alteration	Mineralization	Au	As	Sb	Hg	Ag	Al	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	W	Zn
						g/t	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	ppm	%
MOOTM150	Erdenet West	Tsagaan chuluut West	Altered rock	Silicification, white argillization, limonitization	---	<0.005	10	0.8	<10	0.2	6.01	530	<0.5	<2	0.04	<0.5	<1	5	2	0.48	2.18	0.01	20	3	0.45	<1	260	24	208	0.05	14	<10	4
MOOTM152	Erdenet West	Tsagaan chuluut West	Trachite porphyry?	Weak silicification, argillization, limonitization	---	<0.005	14	0.4	<10	<0.2	7.08	580	0.5	<2	0.04	<0.5	<1	9	4	0.62	2.41	0.12	5	3	0.22	<1	260	24	237	0.17	23	<10	8
MOOTM153	Erdenet West	Tsagaan chuluut West	Altered rock	Silicification, argillization, limonite along crack	---	<0.005	104	0.8	<10	<0.2	7.76	1450	1.0	<2	0.29	<0.5	1	17	59	3.92	2.98	0.24	105	2	2.86	<1	660	18	344	0.33	91	<10	20
MOOTM154	Erdenet West	Tsagaan chuluut West	Tuff breccia	Moderate silicification, white argillization	---	<0.005	<1	0.2	<10	1.2	7.15	450	1.5	<2	0.08	<0.5	1	7	5	0.80	3.18	0.48	40	<1	0.15	<1	120	20	79	0.14	33	<10	38
MOOTM155	Erdenet West	Talbulag South	Tuff breccia	Silicification, limonitization, translucent-white color mineral stain along crack	---	<0.005	14	<0.2	110	0.2	7.92	720	<0.5	<2	0.14	<0.5	2	39	10	1.10	1.53	<0.01	5	4	0.32	<1	1940	28	1420	0.48	91	<10	<2
MOOTM157	Erdenet West	Talbulag South	Tuff breccia	Silicification, pyritization (limonite)	---	<0.005	<1	0.2	110	<0.2	6.98	400	<0.5	<2	0.10	<0.5	<1	39	25	1.43	0.12	0.01	10	3	0.13	<1	1310	8	1240	0.43	121	<10	<2
MOOTM158	Erdenet West	Talbulag South	Rhyolite	Weak silicification, white argillization, limonitization along crack	---	<0.005	7	0.2	10	<0.2	7.44	640	2.0	<2	0.10	<0.5	1	16	3	1.05	3.38	0.37	25	<1	1.07	<1	150	12	156	0.22	32	<10	14
MOOTM180	Erdenet West	Mogon gol South	Altered rock	Weak silicification, white argillization, fine grain muscovite, limonitization	---	<0.005	3	0.2	<10	<0.2	7.51	230	1.5	<2	0.07	<0.5	2	4	6	0.31	2.95	0.35	115	1	0.22	<1	90	8	25	0.13	60	<10	8
MOOTM182	Erdenet West	Khujirin gol	Quartz vein	---	---	<0.005	21	<0.2	<10	<0.2	0.92	50	0.5	<2	0.09	<0.5	1	12	5	0.32	0.32	0.13	155	<1	0.09	4	80	2	47	0.03	12	<10	16
MOOTM186	Erdenet West	Zhuukhin gol West	Quartz vein	---	---	<0.005	16	<0.2	<10	0.2	1.84	150	<0.5	<2	0.12	<0.5	1	11	112	0.57	0.49	0.13	110	1	0.84	2	370	<2	78	0.08	14	<10	14
MOOTM189	Erdenet West	SAR139	Andesite porphyry	Silicification and epidotization, potassium-silicate alteration (biotite), pyritization	Dissemination of malachite (dot and along crack)	0.055	21	<0.2	<10	1.0	8.66	1450	1.0	<2	2.82	<0.5	19	35	2550	2.14	2.33	1.34	465	4	3.37	21	950	22	1335	0.41	85	<10	64
MOOTM170	Erdenet West	SAR139	Silicified rock	Intense silicification, epidotization, potassium-silicate alteration, pyritization	Dissemination of malachite (dot and along crack)	0.030	7	<0.2	<10	0.6	5.51	260	<0.5	<2	0.74	<0.5	3	8	650	1.08	1.07	0.27	155	4	3.15	1	200	22	295	0.12	28	<10	18
MOOTM171	Erdenet West	Under North	Tuff breccia	Weak silicification, weak dissemination of pyritization	---	<0.005	3	0.4	<10	0.2	7.44	730	2.0	<2	0.32	<0.5	3	4	5	1.82	2.93	0.22	540	3	3.86	<1	430	16	120	0.27	17	<10	48
MOOTM172	Erdenet West	Chuluut	Granite	Potassium-silicate alteration	---	<0.005	19	0.2	<10	<0.2	7.40	770	1.5	<2	1.21	<0.5	4	7	5	0.90	4.04	0.24	85	1	2.49	3	170	14	578	0.15	21	<10	16

Phase I survey

Table A-16 Geochemical grade assay results of pan concentrated samples

Sample	District	Cu (ppm)	Pb (ppm)	Zn (ppm)	Au (ppb)	Pt (ppb)	Pd (ppb)	Au (ppb)	Sb (ppm)	As (ppm)	Ba (ppm)	Br (ppm)	Ce (ppm)	Cr (ppm)	Co (ppm)	La (ppm)	Mo (ppm)	Sc (ppm)	Ag (ppm)	Ta (ppm)	Th (ppm)	W (ppm)	U (ppm)
M99HH501P	Southern Camp	39	8	59	10	<5	4	11	<1	3	620	<2	90	490	27	28	<5	24	<10	<2	6	<5	<2
M99HH502P	Southern Camp	39	5	53	4	<5	<2	<10	<1	5	650	<2	49	990	35	20	<5	22	<10	<2	4	<5	<2
M99MZ501P		3	6	36	2	<5	<2	<10	<1	2	720	<2	57	130	<20	24	<5	3	<10	<2	7	<5	<2
M99MZ502P	Altgana gol	9	5	29	<2	<5	<2	<10	<1	5	780	<2	53	630	<20	25	<5	6	<10	<2	5	<5	2
M99MZ503P	Altgana gol NW	18	8	41	<2	<5	4	<10	1	13	510	2	41	<100	21	18	<5	8	<10	<2	3	<5	<2
M99MZ504P	Khokhoo	3	3	13	<2	<5	<2	<10	<1	<2	1000	<2	73	120	<20	32	<5	6	<10	2	8	<5	<2
M99MZ505P	Khokhoo	5	5	18	<2	<5	<2	<10	<1	<2	1500	<2	120	120	<20	41	<5	7	<10	<2	7	<5	<2
M99MZ506P	Khokhoo	6	4	21	<2	<5	<2	<10	<1	<2	890	<2	70	160	<20	27	<5	12	<10	<2	5	<5	<2
M99MZ507P	Erdenet	23	17	57	<2	<5	<2	<10	<1	13	850	<2	58	<100	<20	22	<5	12	<10	<2	7	<5	<2
M99MZ508P	Erdenet	21	12	40	<2	<5	<2	<10	<1	8	620	<2	48	170	<20	23	<5	15	<10	<2	5	<5	<2
M99MZ509P	Bulgan West	20	18	60	<2	<5	<2	<10	<1	12	900	<2	50	<100	<20	22	<5	12	<10	<2	4	<5	<2
M99MZ510P	Bulgan	12	8	30	<2	<5	<2	<10	<1	4	910	<2	37	<100	<20	17	<5	7	<10	<2	3	<5	<2
M99MZ511P	Bulgan	36	18	83	<2	<5	<2	<10	<1	8	880	<2	73	130	35	29	<5	16	<10	<2	4	<5	<2
M99RK500P	Erdenet	62	10	98	<2	<5	<2	<10	1	22	770	<2	110	<100	<20	35	<5	27	<10	<2	3	<5	<2
M99RK501P	Erdenet	28	25	84	<2	<5	<2	<10	<1	13	600	2	<20	<100	<20	16	<5	7	<10	<2	8	<5	2
M99RK502P	Erdenet	18	10	35	<2	<5	<2	<10	<1	7	710	<2	87	170	22	32	<5	12	<10	<2	7	<5	2
M99RK503P	Erdenet	18	6	35	<2	<5	<2	<10	<1	5	630	<2	47	<100	<20	17	<5	12	<10	<2	3	<5	<2
M99RK504P	Erdenet	26	8	36	<2	<5	<2	<10	<1	7	510	<2	49	280	29	21	<5	32	<10	<2	4	<5	<2

Phase II survey

Table A-16 Geochemical grade assay results of pan concentrated samples

Sample No.	District	Au ^{1*}	Pt	Pd	Au ^{2*}	Sb	As	Ba	Br	Ce	Cr	Co	La	Mo	Sc	Ag	Ta	Th	W	U
		ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
M00NK600P	Erdenet West	<0.18	<0.42	<0.42	<10	<1	10	600	<2	41	180	26	24	<5	22	<10	<2	4	<5	<2
M00NK601P	Erdenet West	<0.03	<0.07	<0.07	<10	<1	13	570	3	73	110	36	26	<5	31	<10	<2	3	<5	<2
M00NK602P	Erdenet West	<0.06	<0.14	<0.14	<10	<1	7	730	4	56	<100	<20	21	<5	18	<10	<2	3	<5	<2
M00NK603P	Erdenet West	<0.03	<0.07	<0.07	<10	<1	8	620	2	55	120	35	23	<5	28	<10	<2	<2	<5	<2
M00NK604P	Erdenet West	<0.03	<0.07	<0.07	<10	<1	5	560	2	46	130	38	20	<5	30	<10	<2	<2	<5	<2
M00NK605P	Erdenet West	<0.03	<0.07	<0.07	<10	<1	9	420	<2	39	170	37	18	<5	39	<10	<2	<2	<5	<2
M00HH601P	Tsagaan uul	<0.03	<0.07	<0.07	<10	<1	8	660	<2	48	<100	<20	23	<5	7	<10	<2	3	<5	<2
M00MZ600P	Tariat	<0.03	<0.07	<0.07	<10	<1	<2	770	<2	77	<100	<20	40	<5	5	<10	6	13	<5	5
M00MZ601P	Tosontengel	<0.03	<0.07	<0.07	<10	<1	7	710	<2	110	130	<20	50	<5	11	<10	4	12	<5	4
M00MZ602P	Tsagaan uul	<0.03	<0.07	<0.07	<10	<1	6	770	<2	41	<100	<20	19	<5	8	<10	<2	3	<5	<2
M00MZ603P	Tsagaan uul	<0.03	<0.07	<0.07	<10	<1	9	760	<2	60	100	<20	31	<5	14	<10	<2	4	<5	<2
M00MZ604P	Zelter	<0.03	<0.07	<0.07	<10	3	24	880	<2	76	110	<20	36	<5	9	<10	<2	10	<5	3
M00TM600P	Erdenet West	<0.03	<0.07	<0.07	<10	<1	10	750	<2	57	<100	26	27	<5	20	<10	<2	4	<5	<2
M00TM601P	Erdenet West	<0.03	<0.07	<0.07	<10	<1	9	750	<2	44	<100	26	24	<5	19	<10	<2	3	<5	<2
M00TM602P	Erdenet West	<0.03	<0.07	<0.07	<10	<1	5	480	<2	44	140	35	20	<5	29	<10	<2	<2	<5	<2
M00TM603P	Erdenet West	<0.03	<0.07	<0.07	<10	<1	8	670	2	49	150	30	24	<5	24	<10	<2	3	<5	<2

Au^{1*}: Fire assay
 Au^{2*}: NAA method

Table A-17 Ore grade assay

Phase I survey

Sample	Region	Name of occurrence	Rock Name	Alteration	Mineralization	Au (g/t)	Ag (g/t)	Al (%)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (%)	Cd (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	Fe (%)
M99HH009R	Erdenet	Northwest	ore	---	pyrite, chalcopyrite, molybdenite	<0.03	5	8.90	1000	<10	<20	0.40	<10	10	<10	5670	1.25
M99RK020M	Erdenet	Northwest	silicified rock	strong silicification, quartz+sericite, quartz vein(B-type vein), hypogene zone	chalcopyrite vein and dissemination, covelin along fracture	<0.03	3	7.05	800	<10	<20	0.05	<10	<10	<10	5220	3.85
M99RK021M	Erdenet	Northwest	granite	silicification, limonite along crack, partly oxidized, potassic(biotite+k-feldsper)	quartz+chalcopyrite and pyrite vein, dissemination, malachite along crack	<0.03	1	9.20	1200	<10	<20	0.35	<10	10	10	930	2.45

Sample	Region	Name of occurrence	Rock Name	Alteration	Mineralization	K (%)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (%)	Ni (ppm)	Pb (%)	Sr (ppm)	Ti (%)	V (ppm)	Zn (ppm)
M99HH009R	Erdenet	Northwest	ore	---	pyrite, chalcopyrite, molybdenite	2.3	0.25	90.00	10	3.6	<10	0.01	500	0.05	30	20
M99RK020M	Erdenet	Northwest	silicified rock	strong silicification, quartz+sericite, quartz vein(B-type vein), hypogene zone	chalcopyrite vein and dissemination, covelin along fracture	3.1	0.25	30.00	110	0.4	<10	0.01	50	0.05	40	20
M99RK021M	Erdenet	Northwest	granite	silicification, limonite along crack, partly oxidized, potassic(biotite+k-feldsper)	quartz+chalcopyrite and pyrite vein, dissemination, malachite along crack	2.7	0.65	830.00	<10	2.9	<10	0.02	390	0.15	40	600

Table A-17 Ore grade assay

Phase II survey

Sample No.	District	Occurrence	Rock name	Alteration	Mineralization	Au	Ag	Al	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	Pb	Sr	Ti	V	Zn
						g/t	g/t	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	%	ppm	%	ppm
M00MZ111	Tosontse ngel	Naranbulag	Ore		Malachite, azurite	0.03	16	7.95	700	<10	<20	0.35	<10	20	<10	53200	0.80	2.3	0.15	2440	10	3.60	<10	0.004	190	<0.05	10	200
M00MZ149	Tavt	Ereen No.1 ore body	Quartz vein		Limonite, malachite	<0.03	<1	0.20	<100	<10	<20	<0.05	<10	<10	10	80	0.05	<0.1	<0.05	10	<10	0.05	<10	<0.001	10	<0.05	<10	<20
M00MZ151	Tavt	Ereen No.1b ore body	Quartz vein		Limonite	2.01	14	0.20	<100	<10	<20	0.20	<10	<10	10	6590	0.55	<0.1	<0.05	50	60	<0.05	<10	0.001	40	<0.05	<10	<20
M00MZ152	Tavt	Ereen No.42 ore body	Quartz vein		Limonite, malachite, pyrite	0.18	4	0.20	<100	<10	<20	<0.05	<10	<10	10	1210	1.75	<0.1	<0.05	10	20	0.05	<10	0.004	10	<0.05	10	40
M00MZ155	Tavt	Ereen No.3 ore body	Quartz vein		Limonite	5.52	33	0.05	<100	<10	<20	<0.05	<10	<10	<10	210	0.65	<0.1	<0.05	<10	130	<0.05	<10	0.005	<10	<0.05	<10	<20
M00MZ159	Tavt	Teshig No.2	Skarn		Malachite, limonite	0.06	1	6.30	500	<10	<20	7.70	<10	60	<10	5590	29.10	0.7	1.50	2490	<10	0.25	<10	0.006	390	0.35	160	180
M00MZ174	Erdenet West	Khujiriin gol	Quartz veinlets		Malachite	<0.03	5	6.20	1700	<10	<20	1.30	<10	10	30	1330	3.00	2.8	1.15	1290	<10	1.70	10	0.055	480	0.30	90	340
M00MZ177	Erdenet West	Khujiriin gol	Quartz veinlets		Malachite	<0.03	11	3.55	400	<10	<20	0.55	<10	10	10	2240	2.25	1.6	0.95	1050	<10	0.50	<10	1.170	250	0.05	30	680
M00MZ182	Erdenet West	Zhuukhiin gol	Granodiorite	Potassium alt. ?	Malachite	<0.03	3	9.55	800	<10	<20	0.75	<10	<10	10	2180	1.95	3.0	0.95	170	<10	3.25	10	0.003	570	0.15	60	40
M00TM163	Erdenet West	Zhuukhiin gol	Granodiorite	fine grain pyrite dissemination, potassium silicate alteration	Malachite (dot)	<0.03	3	9.95	1000	<10	<20	1.40	<10	10	10	2550	3.05	2.8	1.50	520	<10	3.35	<10	0.004	760	0.30	100	100

Table A-18 Petrological chemical analysis of rock samples

(1/3)

Phase I survey

No.	Sample	District	Occurrence	Rock Name	Alteration	SiO ₂ (%)	TiO ₂ (%)	Al ₂ O ₃ (%)	Fe ₂ O ₃ (%)	MnO (%)	MgO (%)	CaO (%)	Na ₂ O (%)	K ₂ O (%)	P ₂ O ₅ (%)	Cr ₂ O ₃ (%)	LOI (%)	TOTAL (%)
16	M99MZ015R	Erdenet	Northwest	granitic rock	phyllitic alteration	71.56	0.33	16.68	0.75	0.005	0.130	0.20	7.41	1.21	0.06	0.005	1.12	99.45
17	M99MZ017R	Erdenet	Northwest	granitic rock	potassic alteration	67.70	0.37	16.79	2.30	0.040	0.860	1.22	5.40	2.64	0.13	0.005	1.48	98.93
8	M99HH008R	Erdenet	Northwest	granite~granodiorite	--	66.29	0.57	15.79	3.43	0.050	1.030	2.47	4.21	4.14	0.13	0.005	1.33	99.44
9	M99HH010R	Erdenet	Northwest	andesite dyke	--	51.81	1.02	16.37	11.42	0.370	2.250	1.27	3.85	2.34	0.51	0.005	8.70	99.91
10	M99HH011R	Erdenet	Northwest	ore-granodiorite	(not identified)	68.26	0.38	16.85	2.11	0.030	0.750	1.09	5.57	2.52	0.15	0.005	1.66	99.37
11	M99HH012R	Erdenet	Northwest	andesite dyke	(not identified)	51.03	1.32	15.93	8.05	0.080	2.820	3.05	3.28	2.91	0.66	0.005	5.63	94.76
32	M99RK025R	Erdenet	SAR144	granite	potassic alteration? (biotite rich)	52.66	1.36	17.83	8.75	0.130	3.900	6.43	4.46	2.29	0.40	0.005	1.74	99.95
1	M99NK041R	Erdenet	Tsagaan chuluut (Talbulag)	andesite	---	57.87	0.93	15.9	6.24	0.080	0.840	6.73	3.65	2.29	0.33	0.005	4.61	99.47
2	M99NK051R	Erdenet	SAR139	granite	---	56.87	1.37	16.48	7.81	0.140	2.590	5.44	4.50	2.11	0.54	0.005	1.44	99.29
3	M99NK052R	Erdenet	SAR139	basalt	---	57.22	1.01	17.43	7.14	0.110	3.340	5.65	4.58	2.74	0.54	0.005	0.15	99.91
12	M99HH013R	Erdenet	SAR138	granite	--	60.29	0.68	17.47	5.10	0.140	2.080	3.44	5.23	3.85	0.27	0.005	1.09	99.64
13	M99HH014R	Erdenet	SAR139	basalt	silicified, quartz+epidote vein	59.72	0.69	17.82	5.94	0.080	1.620	5.04	4.76	2.06	0.45	0.005	1.65	99.83
14	M99HH015R	Erdenet	SAR139	granodiorite	--	62.85	0.66	16.85	4.37	0.080	1.690	3.77	4.52	2.88	0.31	0.005	1.88	99.86
15	M99HH017R	Erdenet	SAR139	granodiorite	epidote	62.46	0.70	16.44	4.57	0.090	2.090	3.99	4.64	3.12	0.27	0.005	1.31	99.68
33	M99RK030R	Erdenet	Central	granite	quartz vein in	67.17	0.44	16.49	2.81	0.040	1.020	2.43	5.01	2.45	0.16	0.005	1.19	99.21
34	M99RK032R	Erdenet	Central	diorite	epidote	57.37	0.64	18.26	6.20	0.100	2.520	3.20	5.55	2.62	0.33	0.005	2.12	98.91
4	M99NK059R	Erdenet	Tourmaline	granite	---	67.99	0.52	15.25	2.77	0.030	0.570	1.32	4.06	4.94	0.12	0.005	1.20	98.77
5	M99NK061R	Erdenet	Tourmaline	granite	---	68.52	0.52	15.21	3.04	0.040	0.640	1.55	4.21	5.00	0.11	0.005	0.84	99.68
35	M99RK038R	Erdenet	SAR238	granite	quartz vein in	69.18	0.46	14.86	2.84	0.060	0.810	1.83	4.29	3.89	0.11	0.005	1.11	99.44
20	M99MZ042R	Erdenet	Oyut (SE)	granodiorite porphyry	sericitic	68.93	0.29	16.26	1.72	0.050	0.690	1.14	4.22	3.75	0.12	0.005	1.77	98.94
21	M99MZ043R	Erdenet	Oyut (SE)	granodiorite porphyry	---	69.36	0.29	16.73	1.64	0.020	0.520	1.56	5.85	2.21	0.08	0.005	1.22	99.48
22	M99MZ044R	Erdenet	Oyut (SE)	granodiorite	---	69.58	0.28	17.18	1.05	0.030	0.570	1.34	6.30	1.75	0.04	0.005	1.23	99.35
18	M99MZ036R	Erdenet	Under	granodiorite	k-feldspar, epidote	61.32	0.91	15.38	7.05	0.160	2.180	4.54	3.89	2.45	0.27	0.005	1.47	99.62
19	M99MZ039R	Erdenet	Under	quartz porphyry	---	72.73	0.29	13.86	0.74	0.010	0.005	0.15	4.00	5.88	0.04	0.005	0.96	98.66
23	M99MZ045R	Erdenet	SAR233	volcanic rock	silicification	71.00	0.31	15.39	1.08	0.140	0.005	0.10	5.75	4.81	0.07	0.005	0.93	99.58
24	M99MZ046R	Erdenet	SAR233	hydrothermal breccia	---	65.41	0.90	15.47	4.96	0.090	1.210	1.32	5.73	2.40	0.44	0.005	1.72	99.65
25	M99MZ047R	Erdenet	SAR235	aplite rock	silicification	76.84	0.12	12.37	0.71	0.030	0.100	0.55	3.04	5.30	0.03	0.005	0.54	99.63
26	M99MZ048R	Erdenet	SAR235	granitic rock	silicification, sericite	50.79	0.87	19.06	8.69	0.140	2.840	11.28	2.59	0.13	0.23	0.005	2.83	99.45
6	M99NK067R	Erdenet	Zалуу	basaltic andesite	---	55.26	1.18	16.9	7.45	0.090	3.920	4.43	4.19	2.95	0.57	0.005	2.50	99.44
36	M99RK044R	Erdenet	SAR127	granodiorite	---	52.84	1.11	17.42	8.30	0.130	5.110	7.50	4.11	1.29	0.29	0.005	1.55	99.65
27	M99MZ054R	Bulgan West	Burged khyr	granitic rock	---	72.45	0.30	14.21	1.84	0.030	0.005	0.25	3.93	5.43	0.03	0.005	0.91	99.38
28	M99MZ055R	Bulgan West	Burged khyr	silicified rock	hypogene alunite	74.77	0.31	14.01	0.39	0.005	0.050	0.15	3.43	5.45	0.03	0.005	0.98	99.57
29	M99MZ056R	Bulgan West	Burged khyr	silicified rock	hypogene alunite	72.35	0.38	14.58	1.46	0.030	0.070	0.27	3.98	4.95	0.01	0.005	1.08	99.16
30	M99MZ057R	Bulgan West	Nomgon	magnetic rock	k-feldspar	57.40	1.95	15.38	9.18	0.190	2.070	4.28	5.74	2.12	0.73	0.005	0.58	99.62
31	M99MZ059R	Bulgan West	Nomgon	granite	replacement	62.69	0.92	17.25	4.64	0.070	1.250	2.51	5.73	3.80	0.22	0.005	0.73	99.81
7	M99NK083R	Bulgan	Khar uul	andesite	--	53.62	1.09	17.25	7.37	0.110	3.150	6.40	4.62	2.83	0.57	0.005	2.92	99.93

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Table A-18 Petrological chemical analysis of rock samples

Phase I survey

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No.	Sample	Region	Name of occurrence	Rock Name	Alteration	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Sn (ppm)	W (ppm)	U (ppm)	Th (ppm)	Sr (ppm)	Rb (ppm)	Ba (ppm)	V (ppm)	Co (ppm)	Cs (ppm)	Ga (ppm)	Hf (ppm)	Ni (ppm)	Nb (ppm)	Ta (ppm)	Tl (ppm)	Zr (ppm)
16	M99MZ015R	Erdenet	Northwest	granitic rock	phyllitic alteration	850.0	5	5	0.5	0.5	28	0.50	0.5	293.0	21.6	187	15.0	0.3	0.5	19	5	2.5	1.0	0.25	0.25	205
17	M99MZ017R	Erdenet	Northwest	granitic rock	potassic alteration	455.0	10	55	0.5	0.5	8	1.50	3.0	885.0	42.4	910	35.0	3.0	1.3	19	4	2.5	2.0	0.25	0.25	213
8	M99HH008R	Erdenet	Northwest	granite - granodiorite	--	30.0	10	30	0.5	0.5	5	1.50	5.0	583.0	57.0	967	55.0	6.0	1.1	17	9	2.5	4.0	0.25	0.25	353
9	M99HH010R	Erdenet	Northwest	andesite dyke	--	40.0	5	155	0.5	0.5	5	1.00	3.0	147.5	34.6	770	120.0	47.0	3.2	18	4	15.0	6.0	0.25	0.25	165
10	M99HH011R	Erdenet	Northwest	ore-granodiorite	(not identified)	1010.0	10	70	0.5	0.5	8	1.50	3.0	902.0	38.0	983	35.0	2.5	1.2	18	5	2.5	1.0	0.25	0.25	223
11	M99HH012R	Erdenet	Northwest	andesite dyke	(not identified)	31600.0	10	245	0.5	0.5	8	0.50	3.0	1395.0	42.2	1200	155.0	19.0	1.1	19	4	35.0	8.0	0.25	0.25	179
32	M99RK025R	Erdenet	SAR 144	granite	potassic alteration? (biotite rich)	130.0	5	70	0.5	0.5	6	0.50	1.0	1070.0	41.2	1325	185.0	20.5	1.4	21	10	15.0	5.0	0.25	0.25	328
1	M99NK041R	Erdenet	Talbulag	andesite	---	30.0	15	65	0.5	0.5	5	2.50	9.0	1300.0	45.8	989	170.0	15.0	1.1	17	4	25.0	4.0	0.25	0.25	185
2	M99NK051R	Erdenet	SAR 139	granite	---	35.0	15	65	0.5	0.5	6	1.50	5.0	821.0	41.0	508	140.0	12.5	0.7	18	5	2.5	4.0	0.25	0.25	190
3	M99NK052R	Erdenet	SAR 139	basalt	---	30.0	10	85	0.5	0.5	4	1.00	4.0	1035.0	49.4	978	120.0	18.0	0.8	19	6	20.0	7.0	0.25	0.25	244
12	M99HH013R	Erdenet	SAR 138	granite	--	70.0	15	60	0.5	0.5	6	4.50	7.0	636.0	87.4	576	70.0	10.5	5.8	21	4	2.5	3.0	0.25	0.25	153
13	M99HH014R	Erdenet	SAR 139	basalt	silicified, quartz+epidote vein	495.0	5	30	0.5	0.5	5	1.00	3.0	1545.0	16.0	1225	75.0	8.5	0.6	19	4	2.5	3.0	0.25	0.25	155
14	M99HH015R	Erdenet	SAR 139	granodiorite	--	30.0	15	65	0.5	0.5	5	1.50	5.0	1215.0	29.6	869	80.0	10.0	0.3	19	4	5.0	2.0	0.25	0.25	155
15	M99HH017R	Erdenet	SAR 139	granodiorite	epidote	2.5	10	60	0.5	0.5	5	1.50	4.0	1365.0	31.0	1125	80.0	9.5	0.8	18	4	15.0	1.0	0.25	0.25	154
33	M99RK030R	Erdenet	Central	granite	quartz vein in	660.0	5	40	0.5	0.5	6	1.00	3.0	937.0	40.4	948	45.0	5.0	1.0	19	6	2.5	2.0	0.25	0.25	222
34	M99RK032R	Erdenet	Central	diorite	epidote	2190.0	5	90	0.5	0.5	6	1.50	3.0	1175.0	54.4	855	90.0	19.5	0.9	21	3	2.5	1.0	0.25	0.25	126
4	M99NK059R	Erdenet	Tourmarine	granite	---	15.0	15	50	0.5	0.5	6	4.50	23.0	209.0	162.0	610	40.0	2.5	6.0	16	13	2.5	5.0	0.25	0.25	375
5	M99NK061R	Erdenet	Tourmarine	granite	---	30.0	15	60	0.5	0.5	6	5.00	23.0	217.0	166.0	615	40.0	5.0	4.1	16	12	2.5	5.0	0.25	0.25	396
35	M99RK038R	Erdenet	SAR 238	granite	quartz vein in	25.0	15	40	0.5	0.5	5	1.50	11.0	280.0	114.0	633	45.0	4.5	2.6	16	11	2.5	6.0	0.25	0.25	349
20	M99MZ042R	Erdenet	Ouyt	granodiorite porphyry	sericitic	2.5	5	10	0.5	0.5	7	0.50	3.0	942.0	72.0	1020	10.0	2.0	2.0	18	4	2.5	1.0	0.25	0.25	161
21	M99MZ043R	Erdenet	Ouyt	granodiorite porphyry	---	500.0	10	35	0.5	0.5	5	0.50	1.0	950.0	21.2	1055	20.0	1.5	0.4	17	4	2.5	1.0	0.25	0.25	164
22	M99MZ044R	Erdenet	Ouyt	granodiorite	---	385.0	10	115	0.5	0.5	5	0.25	0.5	930.0	17.2	921	15.0	0.5	1.1	15	4	2.5	0.5	0.25	0.25	192
18	M99MZ036R	Erdenet	Under	granodiorite	k-feldspcr, epidote	30.0	5	75	0.5	0.5	5	3.00	16.0	400.0	45.8	628	110.0	14.5	1.2	17	8	2.5	6.0	0.25	0.25	320
19	M99MZ039R	Erdenet	Under	quartz porphyry	---	590.0	15	55	0.5	0.5	5	1.50	6.0	107.0	76.0	1355	25.0	0.3	0.5	14	8	2.5	6.0	0.25	0.25	271
23	M99MZ045R	Erdenet	SAR 233	volcanic rock	silicification	2.5	10	50	0.5	0.5	4	3.00	13.0	58.0	64.2	380	5.0	0.3	0.5	19	12	2.5	21.0	1.50	0.25	397
24	M99MZ046R	Erdenet	SAR 233	hydrothermal breccia	---	5.0	5	45	0.5	0.5	5	1.50	7.0	444.0	19.0	887	50.0	5.5	0.9	18	10	2.5	18.0	1.50	0.25	377
25	M99MZ047R	Erdenet	SAR 235	aplitic rock	silicification	2.5	15	10	0.5	0.5	5	0.50	17.0	84.7	61.8	300	2.5	0.3	0.3	12	9	2.5	2.0	0.25	0.25	284
26	M99MZ048R	Erdenet	SAR 235	granitic rock	silicification, sericite	10.0	2.5	90	0.5	0.5	5	0.25	1.0	1695.0	1.8	50.5	225.0	13.5	<0.1	23	2	2.5	2.0	0.25	0.25	95
6	M99NK067R	Erdenet	Zалуу	basaltic andesite	---	55.0	25	125	0.5	0.5	5	0.50	4.0	1355.0	50.6	1120	135.0	21.0	0.5	18	5	40.0	6.0	0.25	0.25	182
36	M99RK044R	Erdenet	SAR 127	granodiorite	---	60.0	5	70	0.5	0.5	6	0.50	3.0	1195.0	20.2	515	190.0	25.5	0.7	19	2	30.0	1.0	0.25	0.25	93
27	M99MZ054R	Bulgan West	Burged khyr	granitic rock	---	5.0	25	120	0.5	0.5	6	1.50	14.0	149.5	132.5	619	15.0	1.0	1.9	16	12	2.5	8.0	0.50	0.50	358
28	M99MZ055R	Bulgan West	Burged khyr	silicified rock	hypogene alunite	15.0	50	20	0.5	1.0	6	1.50	10.0	166.5	132.0	608	10.0	0.3	1.2	16	10	2.5	9.0	0.50	0.50	310
29	M99MZ056R	Bulgan West	Burged khyr	silicified rock	hypogene alunite	40.0	50	90	0.5	0.5	6	2.50	12.0	221.0	99.0	817	20.0	1.5	1.3	16	10	2.5	8.0	0.50	0.50	334
30	M99MZ057R	Bulgan West	Nomgon	magnetic rock	k-feldspcr	120.0	10	120	0.5	0.5	5	0.25	1.0	659.0	19.0	954	110.0	10.0	0.4	22	6	2.5	8.0	0.25	0.25	201
31	M99MZ059R	Bulgan West	Nomgon	granite	replacement	10.0	5	40	0.5	0.5	5	1.50	6.0	443.0	55.8	940	65.0	7.5	1.0	21	19	2.5	9.0	0.25	0.25	677
7	M99NK083R	Bulgan	Khar uul	andesite	--	2.5	5	85	0.5	0.5	4	0.50	2.0	1720.0	42.2	855	145.0	19.0	0.1	19	4	30.0	7.0	0.25	0.25	171

Table A-18 Petrological chemical analysis of rock samples

Phase I survey

No.	Sample	Region	Name of occurrence	Rock Name	Alteration	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)	Tm (ppm)	Yb (ppm)	Lu (ppm)	Y (ppm)	
16	M99MZ015R	Erdenet	Northwest	granitic rock	phyllitic alteration	4.5	10.00	0.80	3.00	0.40	0.05	0.10	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	1.0
17	M99MZ017R	Erdenet	Northwest	granitic rock	potassic alteration	21.5	44.50	4.80	17.00	2.40	0.70	2.30	0.05	0.9	0.05	0.30	0.05	0.40	0.05	0.05	6.0
8	M99HH008R	Erdenet	Northwest	granite~granodiorite	--	15.0	36.50	4.30	19.00	3.80	0.80	3.10	0.10	2.5	0.30	1.10	0.05	1.20	0.05	0.05	12.5
9	M99HH010R	Erdenet	Northwest	andesite dyke	--	25.0	56.50	6.80	25.50	5.70	1.60	4.70	0.30	2.7	0.40	1.00	0.05	1.00	0.05	0.05	13.5
10	M99HH011R	Erdenet	Northwest	ore-granodiorite	(not identified)	11.0	24.00	2.60	11.00	2.40	0.80	1.70	0.05	0.8	0.05	0.10	0.05	0.10	0.05	0.05	5.5
11	M99HH012R	Erdenet	Northwest	andesite dyke	(not identified)	31.5	74.50	9.50	42.50	9.00	2.70	10.70	1.30	8.1	1.70	4.80	0.40	4.50	0.40	0.40	56.0
32	M99RK025R	Erdenet	SAR144	granite	potassic alteration? (biotite rich)	18.5	43.00	5.40	22.50	5.80	1.40	5.40	0.40	3.1	0.40	1.50	0.05	1.20	0.05	0.05	15.0
1	M99NK041R	Erdenet	Talbulag	andesite	---	21.0	47.00	5.60	21.50	4.10	1.20	3.70	0.20	2.0	0.30	0.80	0.05	1.00	0.05	0.05	11.0
2	M99NK051R	Erdenet	SAR139	granite	---	18.5	46.50	6.00	26.00	5.40	1.50	5.70	0.60	3.9	0.70	1.90	0.05	1.90	0.05	0.05	22.5
3	M99NK052R	Erdenet	SAR139	basalt	---	33.5	72.00	8.30	33.00	5.90	1.60	5.00	0.50	3.5	0.50	1.50	0.05	1.60	0.05	0.05	16.5
12	M99HH013R	Erdenet	SAR 138	granite	--	29.5	49.50	5.80	24.50	4.60	0.80	4.20	0.30	2.0	0.10	0.90	0.05	0.70	0.05	0.05	10.5
13	M99HH014R	Erdenet	SAR 139	basalt	silicified, quartz+epidote vein	22.5	50.50	6.30	25.00	4.40	1.30	3.70	0.10	2.5	0.20	1.00	0.05	0.90	0.05	0.05	12.0
14	M99HH015R	Erdenet	SAR 139	granodiorite	--	18.5	42.00	5.30	19.50	3.80	1.10	3.20	0.10	1.8	0.10	0.70	0.05	0.60	0.05	0.05	9.0
15	M99HH017R	Erdenet	SAR 139	granodiorite	epidote	18.0	40.50	5.20	21.00	4.20	1.10	3.50	0.10	1.6	0.10	0.50	0.05	0.70	0.05	0.05	8.0
33	M99RK030R	Erdenet	Central	granite	quartz vein in	17.0	36.50	3.90	15.50	2.60	0.80	2.30	0.05	1.0	0.05	0.30	0.05	0.10	0.05	0.05	6.0
34	M99RK032R	Erdenet	Central	diorite	epidote	17.0	38.50	4.80	21.00	3.70	1.10	3.30	0.10	2.2	0.20	0.80	0.05	1.10	0.05	0.05	12.5
4	M99NK059R	Erdenet	Tourmarine	granite	---	25.5	61.50	7.30	28.50	5.80	0.90	7.00	0.70	5.4	1.00	3.30	0.20	3.30	0.30	0.30	32.0
5	M99NK061R	Erdenet	Tourmarine	granite	---	22.0	48.50	5.80	23.00	4.70	0.60	4.90	0.40	3.7	0.80	2.70	0.05	2.70	0.05	0.05	25.5
35	M99RK038R	Erdenet	SAR238	granite	quartz vein in	23.0	52.50	6.10	23.00	3.90	0.70	3.90	0.30	2.8	0.40	1.60	0.05	2.10	0.05	0.05	17.0
20	M99MZ042R	Erdenet	Ouyt	granodiorite porphyry	sericitic	16.0	32.50	3.80	13.00	2.10	0.60	2.00	0.05	0.7	0.05	0.20	0.05	0.20	0.05	0.05	5.0
21	M99MZ043R	Erdenet	Ouyt	granodiorite porphyry	---	17.0	35.00	4.20	17.00	3.30	0.90	3.10	0.30	1.9	0.40	1.10	0.05	0.80	0.05	0.05	13.5
22	M99MZ044R	Erdenet	Ouyt	granodiorite	---	10.0	19.50	2.10	8.00	1.30	0.50	0.60	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	2.0
18	M99MZ036R	Erdenet	Under	granodiorite	k-feldspar, epidote	26.0	57.00	8.40	30.00	7.70	2.60	7.40	1.90	6.7	1.90	3.90	1.10	4.40	1.20	1.20	31.5
19	M99MZ039R	Erdenet	Under	quartz porphyry	---	22.0	47.00	5.60	21.50	4.20	1.00	4.60	0.40	4.1	0.80	2.00	0.10	2.80	0.20	0.20	21.5
23	M99MZ045R	Erdenet	SAR233	volcanic rock	silicification	57.0	118.50	13.00	43.50	6.70	0.90	6.00	0.60	3.9	0.60	2.00	0.05	2.20	0.10	0.10	21.5
24	M99MZ046R	Erdenet	SAR233	hydrothermal breccia	---	38.0	85.00	10.00	38.50	6.70	1.50	6.20	0.70	4.2	0.70	2.20	0.05	2.10	0.05	0.05	20.5
25	M99MZ047R	Erdenet	SAR235	aplitic rock	silicification	29.0	57.50	5.80	19.50	2.60	0.05	1.40	0.05	0.4	0.05	0.05	0.05	0.05	0.05	0.05	3.0
26	M99MZ048R	Erdenet	SAR235	granitic rock	silicification, sericite	14.5	32.00	4.00	16.00	3.00	1.30	3.10	0.10	2.4	0.30	0.90	0.05	1.10	0.05	0.05	11.0
6	M99NK067R	Erdenet	Zалу	basaltic andesite	---	31.0	70.00	7.80	30.50	5.50	1.70	4.50	0.40	2.5	0.30	0.90	0.05	0.80	0.05	0.05	11.0
36	M99RK044R	Erdenet	SAR127	granodiorite	---	13.5	31.50	4.10	18.50	4.10	1.20	3.90	0.30	2.2	0.40	1.10	0.05	0.70	0.05	0.05	12.0
27	M99MZ054R	Bulgan West	Burged khyr	granitic rock	---	7.5	37.00	1.90	7.50	1.40	0.10	1.30	0.05	1.6	0.10	0.60	0.05	0.90	0.05	0.05	8.0
28	M99MZ055R	Bulgan West	Burged khyr	silicified rock	hypogene alunite	19.5	48.00	5.30	17.00	2.50	0.30	1.70	0.05	1.7	0.30	1.10	0.05	1.50	0.05	0.05	11.0
29	M99MZ056R	Bulgan West	Burged khyr	silicified rock	hypogene alunite	22.0	50.50	5.10	19.00	3.60	0.60	2.60	0.10	1.9	0.20	0.90	0.05	1.10	0.05	0.05	11.5
30	M99MZ057R	Bulgan West	Nomgon	magnetic rock	k-feldspar	31.0	76.50	10.80	50.00	10.40	2.50	9.20	1.10	6.5	1.10	3.40	0.10	3.20	0.10	0.10	32.0
31	M99MZ059R	Bulgan West	Nomgon	granite	replacement	24.5	58.00	7.20	29.50	5.80	1.10	5.10	0.50	3.4	0.60	2.00	0.05	1.90	0.10	0.10	19.5
7	M99NK083R	Bulgan	Khar uul	andesite	--	33.5	70.50	8.50	32.50	5.30	1.60	4.70	0.30	2.3	0.30	1.00	0.05	0.70	0.05	0.05	12.0

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Table A-18 Petrological chemical analysis of rock samples

Phase II survey

(1/3)

Sample No.	District	Occurrence	Rock Name	Alteration	Mineralization	SiO ₂	TiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Cr ₂ O ₃	LOI	TOTAL
						% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	%
M00NK100	Erdenet West	Bulgan NW	Trachy andesite			68.36	0.20	15.08	2.90	0.08	0.18	0.13	5.23	5.61	0.04	<0.01	0.98	98.79
M00NK101	Erdenet West	Bulgan NW	Basalt			66.54	0.60	14.30	3.94	0.12	1.36	1.41	4.72	2.96	0.19	<0.01	2.51	98.65
M00NK102	Erdenet West	Bulgan NW	Granitoid			73.84	0.14	13.81	1.03	0.01	0.16	0.79	3.76	4.82	0.05	<0.01	0.44	98.85
M00NK106	Erdenet West	Undrakh	Granitoid			77.37	0.09	12.73	0.19	<0.01	<0.01	0.34	2.47	5.14	0.07	<0.01	0.69	99.09
M00HH109	Tosontsen gel	Naranbulag	Granite			67.99	0.24	17.12	1.72	0.03	0.50	2.36	5.52	2.49	0.09	<0.01	0.77	98.83
M00HH119	Tsagaan uul	Khunkh tsakhir	Granite			75.63	0.03	12.80	0.82	0.05	<0.01	0.29	4.59	4.04	0.01	<0.01	0.39	98.65
M00MZ113	Tosontsen gel	Naranbulag	Granodiorite			67.00	0.27	17.43	1.37	0.04	0.57	2.46	5.46	2.39	0.09	<0.01	1.76	98.84
M00MZ130	Murun west	Ulaannuur	Granite		pyrite dissemination	68.78	0.39	14.50	2.07	0.04	1.07	1.82	3.80	3.76	0.14	<0.01	2.53	98.90
M00MZ131	Murun west	Ulaannuur	Tonalite		limonite after pyrite	73.32	0.41	14.92	0.21	<0.01	0.09	0.21	4.31	4.54	0.09	<0.01	0.95	99.05
M00MZ132	Erdenet West	Bulgan NW	Diorite			50.59	1.23	16.58	8.10	0.10	5.56	7.01	4.98	1.72	0.38	<0.01	2.36	98.61
M00MZ154	Tavt	Ereen No.1 ore body	Granodiorite			66.81	0.39	16.25	2.48	0.05	0.99	2.71	5.25	2.78	0.13	<0.01	0.97	98.81
M00MZ156	Tavt	Ereen No.3 ore body	Diorite			53.81	0.88	12.68	8.20	0.14	7.97	8.68	3.20	1.36	0.22	<0.01	1.28	98.42
M00MZ181	Erdenet West	Zhuukhiin gol	Granodiorite	potassium alt. ?		61.27	0.68	17.20	4.86	0.11	2.22	3.81	4.31	2.95	0.24	<0.01	1.39	99.04

Table A-18 Petrological chemical analysis of rock samples

Sample No.	District	Occurrence	Rock Name	Alteration	Mineralization	Cu	Pb	Zn	Ag	Sn	W	U	Th	Sr	Rb	Ba	V	Co	Cs	Ga	Hf	Ni	Nb	Ta	Tl	Zr
						ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MOONK100	Erdenet West	Bulgan NW	Trachy andesite			5	15	95	<1	6	1	2.5	6	5.7	94.0	50.5	<5	<0.5	0.8	26	18	<5	25	2.0	<0.5	921.0
MOONK101	Erdenet West	Bulgan NW	Basalt			20	15	75	<1	2	<1	1.5	6	206.0	52.4	774.0	50	7.0	0.4	19	7	5	10	0.5	<0.5	245.0
MOONK102	Erdenet West	Bulgan NW	Granitoid			15	20	10	<1	1	1	3.5	24	259.0	105.0	393.0	5	2.0	3.3	20	8	5	11	1.5	<0.5	270.0
MOONK106	Erdenet West	Undrakh	Granitoid			250	15	15	<1	<1	<1	0.5	6	166.0	79.8	1070.0	<5	0.5	0.7	15	11	<5	6	0.5	<0.5	415.0
MOOHH109	Tosontsen gel	Naranbulag	Granite			115	10	15	<1	<1	<1	<0.5	1	1140.0	39.4	1435.0	20	0.5	0.5	19	6	5	3	<0.5	<0.5	221.0
MOOHH119	Tsagaan uul	Khunkh tsakhir	Granite			10	45	75	<1	19	3	12.0	31	7.7	559.0	17.0	<5	<0.5	10.0	34	15	<5	37	9.0	2.0	333.0
M00MZ113	Tosontsen gel	Naranbulag	Granodiorite			800	5	25	<1	<1	1	0.5	1	1805.0	43.8	1410.0	25	2.0	0.8	19	5	5	3	<0.5	<0.5	183.0
M00MZ130	Murun west	Ulaannuur	Granite		pyrite dissemination	15	10	30	<1	2	2	2.5	7	394.0	115.0	1015.0	45	5.5	1.8	17	7	5	9	0.5	<0.5	269.0
M00MZ131	Murun west	Ulaannuur	Tonalite		limonite after pyrite	10	10	15	<1	3	5	1.0	4	153.5	117.0	778.0	25	0.5	0.8	10	7	5	11	0.5	0.5	281.0
M00MZ132	Erdenet West	Bulgan NW	Diorite			55	5	95	<1	2	<1	<0.5	1	967.0	17.4	550.0	175	29.0	0.1	21	3	85	3	<0.5	<0.5	106.5
M00MZ154	Tavt	Ereen No.1 ore body	Granodiorite			195	15	40	<1	3	<1	1.5	5	775.0	55.6	903.0	50	5.0	1.9	20	6	10	4	<0.5	<0.5	237.0
M00MZ156	Tavt	Ereen No.3 ore body	Diorite			180	5	85	<1	2	1	0.5	2	743.0	22.4	410.0	160	33.5	1.2	17	3	140	4	<0.5	<0.5	83.5
M00MZ181	Erdenet West	Zhuukhiin gol	Granodiorite	potassium alt. ?		620	10	120	<1	2	1	1.0	6	867.0	72.8	870.0	85	12.5	1.8	20	5	15	5	<0.5	<0.5	193.5

Phase II survey

Table A-18 Petrological chemical analysis of rock samples

(3/3)

Sample No.	District	Occurrence	Rock Name	Alteration	Mineralization	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y
						ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
M00NK100	Erdenet West	Bulgan NW	Trachy andesite			43.0	86.0	11.5	41.0	8.1	0.4	7.5	1.4	8.1	1.8	5.3	0.8	5.5	0.8	51.0
M00NK101	Erdenet West	Bulgan NW	Basalt			28.5	58.5	7.8	29.0	5.5	1.2	5.2	0.9	5.1	1.0	3.0	0.5	3.1	0.4	29.5
M00NK102	Erdenet West	Bulgan NW	Granitoid			21.0	43.0	5.3	17.5	3.2	0.4	2.5	0.4	2.4	0.5	1.4	0.2	1.5	0.1	14.5
M00NK106	Erdenet West	Undrakh	Granitoid			11.0	23.5	2.6	8.5	1.5	0.3	1.3	0.2	1.2	0.3	0.8	0.1	1.0	0.1	8.5
M00HH109	Tosontsen gel	Naranbulag	Granite			14.0	25.0	3.2	11.0	1.7	0.6	1.4	0.1	0.9	0.1	0.5	<0.1	0.5	<0.1	5.0
M00HH119	Tsagaan uul	Khunkh tsakhir	Granite			21.0	59.5	9.8	37.5	12.3	0.1	11.7	2.7	18.3	4.0	14.1	2.8	20.4	2.7	155.5
M00MZ113	Tosontsen gel	Naranbulag	Granodiorite			12.0	21.0	2.7	9.5	1.5	0.6	1.2	0.1	0.9	0.1	0.5	<0.1	0.5	<0.1	5.5
M00MZ130	Murun west	Ulaannuur	Granite		pyrite dissemination	31.0	54.5	6.5	21.5	3.7	0.9	2.7	0.5	2.4	0.5	1.4	0.2	1.6	0.2	14.5
M00MZ131	Murun west	Ulaannuur	Tonalite		limonite after pyrite	17.0	30.0	3.6	12.0	2.0	0.5	1.5	0.2	1.2	0.3	0.8	0.1	0.8	0.1	8.0
M00MZ132	Erdenet West	Bulgan NW	Diorite			15.5	34.0	5.2	21.5	4.4	1.4	3.4	0.5	2.3	0.4	1.1	0.1	1.0	0.1	11.5
M00MZ154	Tavt	Ereen No.1 ore body	Granodiorite			16.5	30.5	4.0	14.0	2.4	0.8	1.9	0.3	1.2	0.2	0.6	<0.1	0.5	<0.1	6.5
M00MZ156	Tavt	Ereen No.3 ore body	Diorite			16.0	31.5	4.5	19.0	4.1	1.3	3.7	0.6	3.0	0.6	1.4	0.1	1.3	0.1	14.5
M00MZ181	Erdenet West	Zhuukhiin gol	Granodiorite	potassium alt. ?		20.0	40.5	5.6	21.0	3.8	1.1	3.3	0.5	2.6	0.5	1.4	0.2	1.4	0.1	15.0

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz samples (1/8)

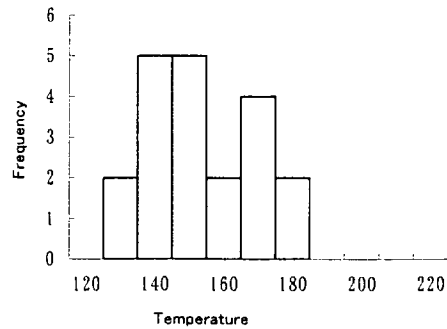
Phase I survey

Sample:M99NK003M

Fluid inclusion: Many other secondary inclusions are observed.

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	5.0	10	po	148	-2.2	3.71
2	Quartz	5.0	10	po	157	-2.5	4.18
3	Quartz	5.0	7	po	139	-2.7	4.49
4	Quartz	5.0	10	irr	142	-1.0	1.74
5	Quartz	7.5	10	po	146	-2.8	4.65
6	Quartz	5.0	7	po	136	-1.5	2.57
7	Quartz	2.5	7	po	144	-	-
8	Quartz	< 2.5	7	po	156	-	-
9	Quartz	10.0	12	po	164	-3.0	4.96
10	Quartz	7.5	10	irr	173	-1.8	3.06
11	Quartz	7.5	12	po	182	-2.2	3.71
12	Quartz	5.0	10	po	166	-1.6	2.74
13	Quartz	5.0	7	eg	148	-	-
14	Quartz	2.5	5	po	171	-	-
15	Quartz	< 2.5	5	eg	155	-	-
16	Quartz	< 2.5	3	eg	150	-	-
17	Quartz	7.5	13	po	184	-1.7	2.90
18	Quartz	5.0	10	po	172	-2.8	4.65
19	Quartz	5.0	7	po	175	-2.0	3.39
20	Quartz	2.5	5	eg	156	-	-

eg: egg-shape; irr: irregular; po: polygon; sq: square; tr: triangle; tu:tube; wg: wedge-shape



Mineral Quartz
 Inclusions 20
 Maximum 184 °C
 Minimum 136 °C
 Average 161.1 °C
 deviation 13.9

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz samples (2/8)

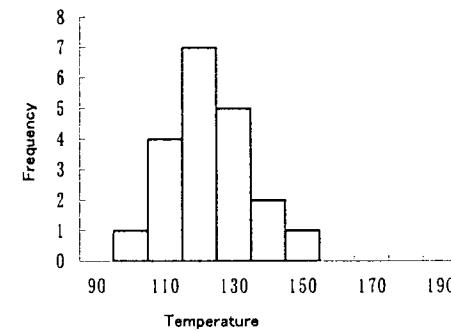
Phase I survey

Sample:M99NK005M

Fluid inclusion: Many other secondary inclusions are observed.

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	5.0	10	po	112	-1.3	2.24
2	Quartz	5.0	7	po	109	-1.0	1.74
3	Quartz	12.5	13	irr	143	-2.8	4.65
4	Quartz	7.5	12	po	128	-2.4	4.03
5	Quartz	5.0	10	po	121	-1.4	2.41
6	Quartz	5.0	7	po	131	-1.1	1.91
7	Quartz	5.0	5	eg	110	-1.0	1.74
8	Quartz	2.5	7	eg	125	-	-
9	Quartz	5.0	10	po	137	-1.4	2.41
10	Quartz	5.0	10	po	134	-	-
11	Quartz	5.0	10	po	128	-1.3	2.24
12	Quartz	7.5	12	sq	151	-2.2	3.71
13	Quartz	5.0	12	po	137	-1.4	2.41
14	Quartz	5.0	10	po	122	-1.3	2.24
15	Quartz	2.5	7	eg	137	-	-
16	Quartz	< 2.5	5	eg	111	-	-
17	Quartz	7.5	10	po	124	-1.3	2.24
18	Quartz	7.5	10	po	145	-1.3	2.24
19	Quartz	2.5	5	eg	117	-	-
20	Quartz	5.0	7	po	121	-0.8	1.40

eg: egg-shape; irr: irregular; po: polygon; sq: square; tr: triangle; tu:tube; wg: wedge-shape



Mineral Quartz
 Inclusions 20
 Maximum 112 °C
 Minimum 109 °C
 Average 161.1 °C
 deviation 13.9

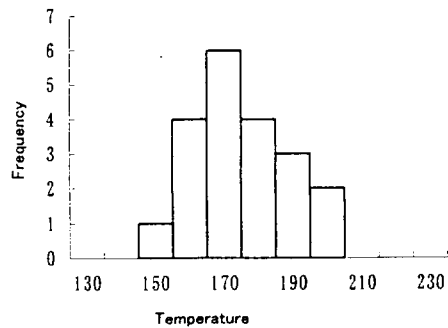
Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz samples (3/8)

Phase I survey

Sample: M99NK037R Fluid inclusion: Many other leiqid single phase inclusions are obser

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	12.5	10	irr	175	-0.9	1.57
2	Quartz	5.0	7	po	181	-0.5	0.88
3	Quartz	2.5	3	eg	179	-	-
4	Quartz	2.5	3	eg	167	-	-
5	Quartz	7.5	10	po	193	-0.8	1.40
6	Quartz	5.0	10	po	188	-0.3	0.53
7	Quartz	5.0	7	po	167	-0.4	0.71
8	Quartz	5.0	10	sq	188	-	-
9	Quartz	5.0	10	po	191	-0.3	0.53
10	Quartz	5.0	7	po	164	-0.5	0.88
11	Quartz	10.0	7	po	193	-0.8	1.40
12	Quartz	5.0	12	po	204	-0.6	1.05
13	Quartz	2.5	10	po	202	-	-
14	Quartz	< 2.5	7	eg	177	-	-
15	Quartz	< 2.5	5	eg	151	-	-
16	Quartz	5.0	10	po	182	-0.7	1.23
17	Quartz	5.0	7	po	178	-0.8	1.40
18	Quartz	2.5	5	eg	161	-	-
19	Quartz	5.0	10	po	177	-	-
20	Quartz	5.0	7	po	171	-0.5	0.88

eg: egg-shape; irr: irregular; po: polygon; sq: square; tr: triangle; tutube; wg: wedge-shape



Mineral Quartz
 Inclusions 20
 Maximum 184 °C
 Minimum 136 °C
 Average 161.1 °C
 deviation 13.9

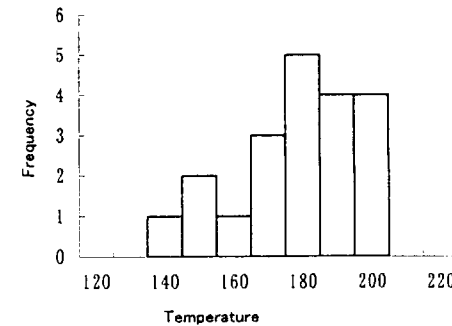
Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz samples (4/8)

Phase I survey

Sample: M99MZ008M Fluid inclusion: Many other secondary inclusions are observed. Necking down is also observed.

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	10.0	7	po	181	-7.5	11.10
2	Quartz	22.5	10	irr	155	-7.8	11.46
3	Quartz	10.0	7	po	142	-7.3	10.86
4	Quartz	5.0	10	po	175	-	-
5	Quartz	5.0	10	po	186	-	-
6	Quartz	15.0	7	tu	193	-4.1	6.59
7	Quartz	10.0	7	tr	173	-5.2	8.14
8	Quartz	7.5	10	po	189	-3.5	5.71
9	Quartz	12.5	12	irr	204	-8.0	11.70
10	Quartz	10.0	10	po	194	-6.7	10.11
11	Quartz	12.5	10	irr	206	-8.2	11.93
12	Quartz	7.5	10	eg	196	-3.8	6.16
13	Quartz	7.5	7	po	192	-5.1	8.00
14	Quartz	5.0	7	po	188	-	-
15	Quartz	12.5	12	irr	206	-4.3	6.88
16	Quartz	7.5	10	po	182	-5.8	8.95
17	Quartz	5.0	7	po	164	-	-
18	Quartz	10.0	12	irr	201	-7.7	11.34
19	Quartz	5.0	10	po	177	-7.6	11.22
20	Quartz	5.0	7	po	156	-	-

eg: egg-shape; irr: irregular; po: polygon; sq: square; tr: triangle; tutube; wg: wedge-shape



Mineral Quartz
 Inclusions 20
 Maximum 184 °C
 Minimum 136 °C
 Average 161.1 °C
 deviation 13.9

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz samples (5/8)

Phase I survey

Sample M99MZ016M Fluid inclusion: Many other secondary inclusions are observed.

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	10.0	10	irr	161	-0.8	1.40
2	Quartz	5.0	10	po	169	-1.2	2.07
3	Quartz	5.0	10	po	162	-	-
4	Quartz	20.0	10	po	144	-1.8	3.06
5	Quartz	5.0	7	po	132	-1.0	1.74
6	Quartz	10.0	10	po	143	-1.4	2.41
7	Quartz	5.0	10	sq	159	-1.0	1.74
8	Quartz	5.0	7	po	140	-1.2	2.07
9	Quartz	5.0	5	po	144	-	-
10	Quartz	2.5	3	po	142	-	-
11	Quartz	7.5	10	sq	160	-1.1	1.91
12	Quartz	5.0	10	po	155	-0.7	1.23
13	Quartz	5.0	7	po	151	-0.8	1.40
14	Quartz	5.0	3	po	142	-0.7	1.23
15	Quartz	12.5	12	irr	138	-0.8	1.40
16	Quartz	10.0	10	irr	142	-1.6	2.74
17	Quartz	10.0	12	po	172	-1.8	3.06
18	Quartz	7.5	10	po	155	-1.2	2.07
19	Quartz	2.5	7	eg	154	-	-
20	Quartz	< 2.5	5	eg	158	-	-

eg: egg-shape; irr: irregular; po: polygon; sq: square; tr: triangle; tu: tube; wg: wedge-shape

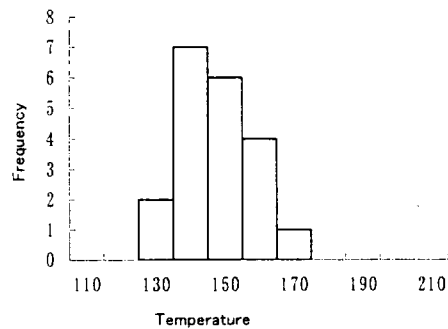


Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz samples (6/8)

Phase I survey

Sample M99MZ065M Fluid inclusion: Many other liquid single phase inclusions are observed.

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	5.0	7	po	176	-0.1	0.18
2	Quartz	5.0	7	po	167	-0.2	0.35
3	Quartz	7.5	7	po	156	0.0	0.00
4	Quartz	7.5	7	po	159	-0.2	0.35
5	Quartz	5.0	10	po	195	0.0	0.00
6	Quartz	2.5	7	eg	187	-	-
7	Quartz	2.5	5	eg	152	-	-
8	Quartz	5.0	10	po	188	-0.2	0.35
9	Quartz	5.0	7	po	194	0.0	0.00
10	Quartz	2.5	5	eg	175	-	-
11	Quartz	< 2.5	5	eg	145	-	-
12	Quartz	< 2.5	3	eg	147	-	-
13	Quartz	7.5	10	sq	186	0.0	0.00
14	Quartz	5.0	5	po	176	-0.1	0.18
15	Quartz	5.0	5	po	171	-0.1	0.18
16	Quartz	2.5	5	eg	160	-	-
17	Quartz	2.5	3	eg	145	-	-
18	Quartz	5.0	7	po	174	-0.2	0.35
19	Quartz	5.0	7	po	182	0.0	0.00
20	Quartz	< 2.5	5	eg	151	-	-

eg: egg-shape; irr: irregular; po: polygon; sq: square; tr: triangle; tu: tube; wg: wedge-shape

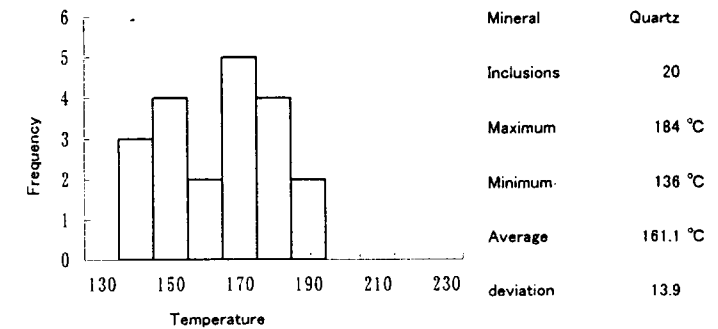


Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz samples (7/8)

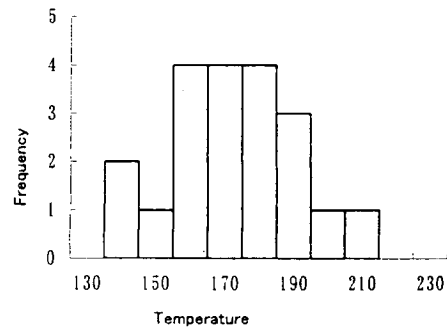
Phase I survey

Sample M99RK013R

Fluid inclusion: Many other secondary inclusions are observed.

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature ($^{\circ}$ C)	Melting Temp ($^{\circ}$ C)	NaCl Wt (%)
1	Quartz	7.5	10	irr	186	-0.5	0.88
2	Quartz	2.5	7	po	194	-	-
3	Quartz	2.5	5	po	202	-	-
4	Quartz	< 2.5	5	po	147	-	-
5	Quartz	< 2.5	5	eg	162	-	-
6	Quartz	5.0	10	po	159	-0.4	0.71
7	Quartz	5.0	7	po	184	-0.4	0.71
8	Quartz	< 2.5	5	eg	163	-	-
9	Quartz	< 2.5	3	eg	173	-	-
10	Quartz	< 2.5	5	eg	176	-	-
11	Quartz	5.0	12	po	217	-0.4	0.71
12	Quartz	5.0	10	po	190	-0.5	0.88
13	Quartz	5.0	7	sq	177	-0.2	0.35
14	Quartz	< 2.5	10	po	182	-	-
15	Quartz	2.5	5	po	193	-	-
16	Quartz	< 2.5	5	eg	167	-	-
17	Quartz	< 2.5	3	eg	161	-	-
18	Quartz	5.0	7	po	188	-0.4	0.71
19	Quartz	< 2.5	5	eg	172	-	-
20	Quartz	< 2.5	3	eg	148	-	-

eg: egg-shape; irr: irregular; po: polygon; sq: square; tr: triangle; tutube: wg: wedge-shape



Mineral	Quartz
Inclusions	20
Maximum	184 $^{\circ}$ C
Minimum	136 $^{\circ}$ C
Average	161.1 $^{\circ}$ C
deviation	13.9

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz sample

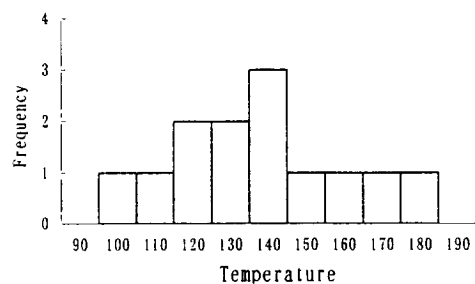
Phase II survey

(1/11)

Sample: M00HH202

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	5.0	7	tr	143	-0.2	0.35
2	Quartz	< 2.5	10	eg	125		
3	Quartz	< 2.5	7	eg	124		
4	Quartz	5.0	12	po	173	-0.6	1.05
5	Quartz	2.5	10	po	145		
6	Quartz	< 2.5	10	po	138		
7	Quartz	5.0	12	sq	166	-0.3	0.53
8	Quartz	2.5	12	po	152	-0.1	0.18
9	Quartz	< 2.5	10	eg	148		
10	Quartz	5.0	13	po	181	-0.1	0.18
11	Quartz	< 2.5	7	eg	108		
12	Quartz	< 2.5	7	eg	132		
13	Quartz	< 2.5	5	eg	115		

eg:egg-shape, irr:irregular, po:polygon, sq:square, tr:triangle, lu:tube, wg:wedge-shap



Mineral Quartz
 Inclusions 13
 Maximum 181.0 °C
 Minimum 108.0 °C
 Average 142.3 °C
 Deviation 21.2
 Average Salinity 0.46

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz sample

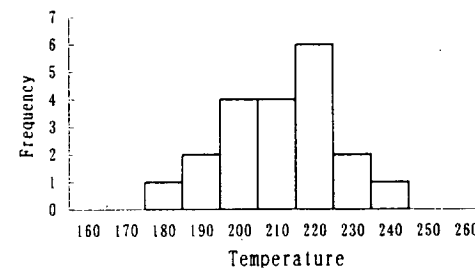
Phase II survey

(2/11)

Sample: M00MZ120

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	12.5	10	po	192	-2.3	3.87
2	Quartz	10.0	12	po	208	-1.9	3.23
3	Quartz	5.0	12	po	212	-2.0	3.39
4	Quartz	5.0	12	po	235	.	.
5	Quartz	7.5	13	tr	209	-1.5	2.57
6	Quartz	5.0	10	po	212	-2.4	4.03
7	Quartz	5.0	10	eg	225	.	.
8	Quartz	7.5	13	po	206	-2.4	4.03
9	Quartz	5.0	12	sq	215	-2.5	4.18
10	Quartz	2.5	10	eg	222	.	.
11	Quartz	< 2.5	7	eg	202	.	.
12	Quartz	< 7.5	12	po	227	-2.3	3.87
13	Quartz	7.5	15	wb	247	-1.2	2.07
14	Quartz	5.0	15	po	224	-2.3	3.87
15	Quartz	2.5	10	po	195	.	.
16	Quartz	< 2.5	7	eg	187	.	.
17	Quartz	5.0	12	po	227	-0.8	1.40
18	Quartz	10.0	13	irr	214	-1.0	1.74
19	Quartz	7.5	12	tr	230	-2.2	3.71
20	Quartz	5.0	10	po	225	.	.

eg:egg-shape, irr:irregular, po:polygon, sq:square, tr:triangle, lu:tube, wg:wedge-shap



Mineral Quartz
 Inclusions 20
 Maximum 247 °C
 Minimum 187 °C
 Average 215.7 °C
 Deviation 14.7
 Average Salinity 3.23

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz sample

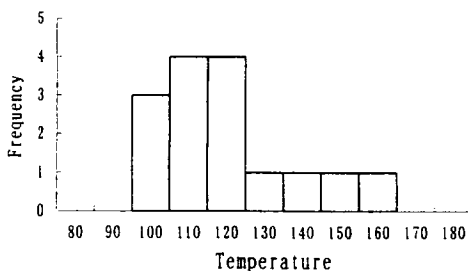
Phase II survey

(3/11)

Sample: M00MZ149

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	5.0	10	wg	132	-0.4	0.71
2	Quartz	2.5	7	po	112	-0.2	2.07
3	Quartz	< 2.5	5	po	120	.	.
4	Quartz	< 2.5	5	eg	116	.	.
5	Quartz	5.0	10	sq	145	-1.5	2.57
6	Quartz	2.5	10	po	126	-0.1	0.18
7	Quartz	2.5	7	po	163	.	.
8	Quartz	< 2.5	7	po	118	.	.
9	Quartz	< 2.5	7	eg	106	.	.
10	Quartz	< 2.5	5	eg	103	.	.
11	Quartz	5.0	10	tr	152	-2.3	3.87
12	Quartz	2.5	7	eg	121	.	.
13	Quartz	2.5	7	po	117	.	.
14	Quartz	< 2.5	5	eg	126	.	.
15	Quartz	< 2.5	3	eg	104	.	.

eg:egg-shape. irr:irregular. po:polygon, sq:square, tr:triangle, tu:tube, wg:wedge-shap



Mineral Quartz
 Inclusions 15
 Maximum 163 °C
 Minimum 103 °C
 Average 124.1 °C
 Deviation 16.9
 Average Salinity 1.88

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz sample

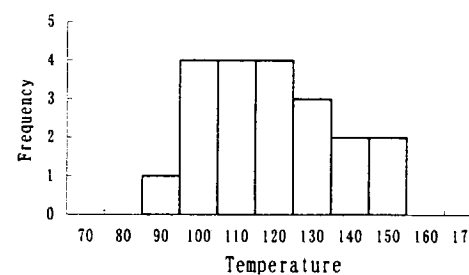
Phase II survey

(4/11)

Sample: M00MZ151

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	7.5	10	po	103	-3.2	5.26
2	Quartz	5.0	10	po	112	-4.2	6.74
3	Quartz	5.0	12	sq	126	-4.3	6.88
4	Quartz	2.5	10	po	106	.	.
5	Quartz	2.5	15	po	157	.	.
6	Quartz	12.5	10	po	115	-2.3	3.87
7	Quartz	10.0	7	irr	105	-0.8	1.40
8	Quartz	7.5	12	po	131	-4.5	7.17
9	Quartz	5.0	12	po	124	.	.
10	Quartz	2.5	10	po	129	.	.
11	Quartz	2.5	12	po	158	.	.
12	Quartz	< 2.5	7	eg	98	.	.
13	Quartz	15.0	15	irr	141	-2.3	3.87
14	Quartz	5.0	13	sq	137	-4.1	6.59
15	Quartz	2.5	10	po	117	.	.
16	Quartz	< 2.5	10	po	128	.	.
17	Quartz	< 2.5	7	eg	105	.	.
18	Quartz	5.0	12	po	137	-3.1	5.11
19	Quartz	5.0	12	po	141	-4.6	7.31
20	Quartz	2.5	10	po	118	.	.

eg:egg-shape. irr:irregular. po:polygon, sq:square, tr:triangle, tu:tube, wg:wedge-shap



Mineral Quartz
 Inclusions 20
 Maximum 158 °C
 Minimum 98 °C
 Average 124.4 °C
 Deviation 16.9
 Average Salinity 5.42

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz sample

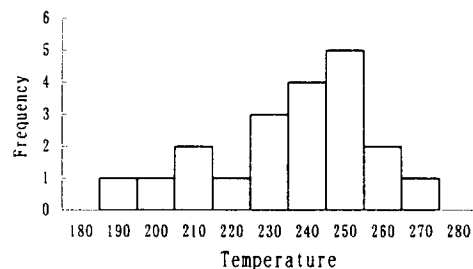
Phase II survey

(5/11)

Sample: M00MZ155

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	7.5	17	po	269	-0.1	0.18
2	Quartz	5.0	12	po	218	-0.2	0.35
3	Quartz	5.0	13	irr	239	-0.1	0.18
4	Quartz	5.0	12	sq	198	0.0	0.00
5	Quartz	2.5	13	po	252	.	.
6	Quartz	2.5	12	po	255	.	.
7	Quartz	< 2.5	10	eg	231	.	.
8	Quartz	5.0	12	po	205	-0.1	0.18
9	Quartz	5.0	20	wg	273	0.0	0.00
10	Quartz	7.5	17	wg	265	0.0	0.00
11	Quartz	5.0	13	po	242	-0.2	0.35
12	Quartz	5.0	15	po	253	-0.1	0.18
13	Quartz	2.5	10	po	244	.	.
14	Quartz	2.5	10	eg	223	.	.
15	Quartz	< 2.5	7	eg	236	.	.
16	Quartz	5.0	13	po	241	-0.6	1.05
17	Quartz	5.0	15	po	251	-0.2	0.35
18	Quartz	2.5	10	po	242	.	.
19	Quartz	< 2.5	10	eg	256	.	.
20	Quartz	< 2.5	7	eg	217	.	.

eg:egg-shape, irr:irregular, po:polygon, sq:square, tr:triangle, tu:tube, wg:wedge-shap



Mineral Quartz
 Inclusions 20
 Maximum 273 °C
 Minimum 198 °C
 Average 240.5 °C
 Deviation 19.8
 Average Salinity 0.26

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz sample

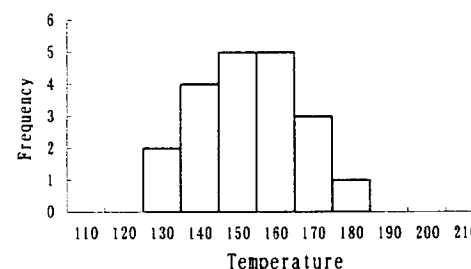
Phase II survey

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Sample: M00MZ162

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	22.5	12	po	175	-1.2	2.07
2	Quartz	20.0	10	tu	170	-1.5	2.57
3	Quartz	5.0	13	tr	157	.	.
4	Quartz	15.0	10	po	136	-1.2	2.07
5	Quartz	10.0	10	po	140	-0.4	0.71
6	Quartz	5.0	10	sq	144	.	.
7	Quartz	5.0	10	po	152	.	.
8	Quartz	12.5	10	tu	155	-0.8	1.40
9	Quartz	10.0	12	po	166	-1.0	1.74
10	Quartz	5.0	10	po	158	.	.
11	Quartz	7.5	12	po	163	-1.4	2.41
12	Quartz	5.0	10	po	152	-0.9	1.57
13	Quartz	22.5	10	tu	182	-1.2	2.07
14	Quartz	17.5	10	po	144	-1.0	1.74
15	Quartz	5.0	12	sq	168	.	.
16	Quartz	5.0	10	po	136	.	.
17	Quartz	12.5	13	wg	165	-0.8	1.40
18	Quartz	7.5	12	po	172	-1.2	2.07
19	Quartz	5.0	12	po	169	.	.
20	Quartz	5.0	10	po	143	.	.

eg:egg-shape, irr:irregular, po:polygon, sq:square, tr:triangle, tu:tube, wg:wedge-shap



Mineral Quartz
 Inclusions 20
 Maximum 182 °C
 Minimum 136 °C
 Average 157.4 °C
 Deviation 13.3
 Average Salinity 1.82

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Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz sample

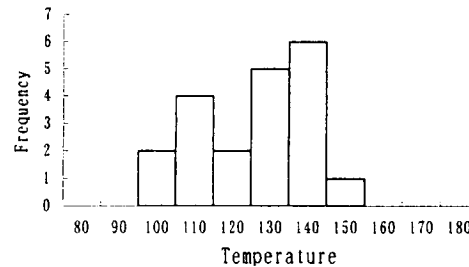
Phase II survey

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Sample: M00MZ163

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	12.5	10	irr	108	-0.3	0.53
2	Quartz	5.0	7	po	110	.	.
3	Quartz	5.0	10	po	145	-0.2	0.35
4	Quartz	5.0	10	po	116	-0.3	0.53
5	Quartz	5.0	10	sq	132	.	.
6	Quartz	5.0	7	sq	113	-0.7	1.23
7	Quartz	10.0	10	po	137	-0.3	0.53
8	Quartz	15.0	13	wg	142	-0.2	0.35
9	Quartz	5.0	10	tu	106	.	.
10	Quartz	7.5	7	po	122	-1.1	1.91
11	Quartz	7.5	7	po	132	-0.3	0.53
12	Quartz	5.0	10	po	123	.	.
13	Quartz	2.5	10	po	144	.	.
14	Quartz	< 2.5	7	eg	111	.	.
15	Quartz	5.0	10	po	145	-0.6	1.05
16	Quartz	5.0	12	sq	136	-0.2	0.53
17	Quartz	7.5	13	po	152	-0.5	0.88
18	Quartz	5.0	12	po	141	-0.3	0.53
19	Quartz	5.0	10	po	145	.	.
20	Quartz	< 2.5	7	eg	135	.	.

eg:egg-shape, irr:irregular, po:polygon, sq:square, tr:triangle, tu:tube, wg:wedge-shap



Mineral Quartz
 Inclusions 20
 Maximum 152 °C
 Minimum 106 °C
 Average 129.8 °C
 Deviation 14.4

Average Salinity 0.75

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz sample

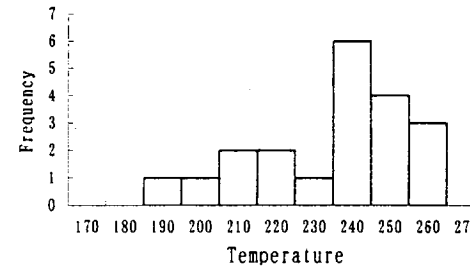
Phase II survey

(8/11)

Sample: M00MZ177

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	7.5	12	po	237	-0.1	0.18
2	Quartz	2.5	10	po	223	.	.
3	Quartz	5.0	13	po	260	0.0	0.00
4	Quartz	5.0	15	po	267	0.0	0.00
5	Quartz	7.5	10	po	207	-0.1	0.18
6	Quartz	2.5	10	po	194	.	.
7	Quartz	2.5	10	eg	217	.	.
8	Quartz	5.0	13	po	244	0.0	0.00
9	Quartz	< 2.5	10	po	262	.	.
10	Quartz	< 2.5	10	po	243	.	.
11	Quartz	5.0	15	sq	251	0.0	0.00
12	Quartz	5.0	13	sq	255	-0.1	0.18
13	Quartz	2.5	12	po	247	.	.
14	Quartz	2.5	10	po	219	.	.
15	Quartz	< 2.5	10	eg	240	.	.
16	Quartz	< 2.5	10	eg	245	.	.
17	Quartz	5.0	13	tr	248	0.0	0.00
18	Quartz	5.0	12	po	251	-0.1	0.18
19	Quartz	2.5	12	po	253	.	.
20	Quartz	< 2.5	10	po	221	.	.

eg:egg-shape, irr:irregular, po:polygon, sq:square, tr:triangle, tu:tube, wg:wedge-shap



Mineral Quartz
 Inclusions 20
 Maximum 267 °C
 Minimum 194 °C
 Average 239.2 °C
 Deviation 19.0

Average Salinity 0.08

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz sample

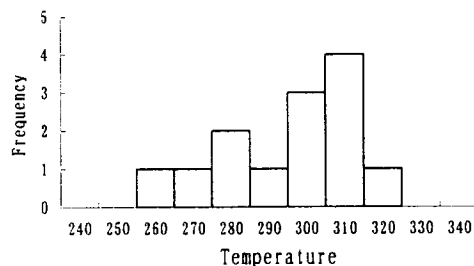
Phase II survey

(9/11)

Sample: MOONK158

No.	Mineral	Size (mμ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	5.0	20	sq	312	-1.2	2.07
2	Quartz	5.0	17	po	287	-1.3	2.24
3	Quartz	2.5	15	po	318	-0.7	1.23
4	Quartz	2.5	17	eg	305	.	.
5	Quartz	< 2.5	15	eg	303	.	.
6	Quartz	< 2.5	13	eg	295	.	.
7	Quartz	5.0	17	sq	318	-0.9	1.57
8	Quartz	5.0	15	eg	305	-0.2	0.35
9	Quartz	< 2.5	13	eg	327	.	.
10	Quartz	< 2.5	10	eg	275	.	.
11	Quartz	< 2.5	12	eg	265	.	.
12	Quartz	< 2.5	10	eg	282	.	.
13	Quartz	5.0	15	po	311	-1.4	2.41

eg:egg-shape, irr:irregular, po:polygon, sq:square, tr:triangle, lu:tube, wg:wedge-shap



Mineral Quartz
 Inclusions 13
 Maximum 327 °C
 Minimum 265 °C
 Average 300.2 °C
 Deviation 17.7
 Average Salinity 1.65

Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz sample

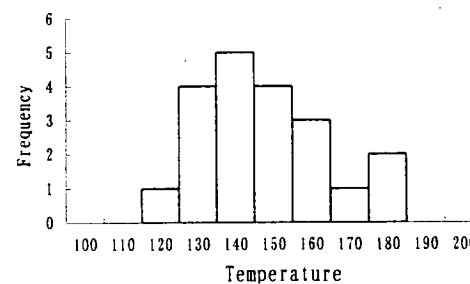
Phase II survey

(10/11)

Sample: M00TM138

No.	Mineral	Size (mμ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	5.0	10	po	162	-0.4	0.71
2	Quartz	< 2.5	7	po	143	.	.
3	Quartz	< 2.5	7	eg	135	.	.
4	Quartz	5.0	10	po	151	-0.3	0.53
5	Quartz	2.5	7	po	136	.	.
6	Quartz	< 2.5	7	eg	130	.	.
7	Quartz	< 2.5	12	eg	166	.	.
8	Quartz	< 2.5	10	eg	152	.	.
9	Quartz	5.0	12	wg	177	-0.1	0.18
10	Quartz	2.5	7	po	144	-0.2	0.35
11	Quartz	< 2.5	7	eg	148	.	.
12	Quartz	< 2.5	7	eg	142	.	.
13	Quartz	5.0	12	sq	182	-0.4	0.71
14	Quartz	< 2.5	7	eg	124	.	.
15	Quartz	< 2.5	10	eg	151	.	.
16	Quartz	< 2.5	10	eg	164	.	.
17	Quartz	< 2.5	7	eg	142	.	.
18	Quartz	5.0	12	po	181	-0.2	0.35
19	Quartz	< 2.5	10	eg	156	.	.
20	Quartz	< 2.5	7	eg	137	.	.

eg:egg-shape, irr:irregular, po:polygon, sq:square, tr:triangle, lu:tube, wg:wedge-shap



Mineral Quartz
 Inclusions 20
 Maximum 182 °C
 Minimum 124 °C
 Average 151.2 °C
 Deviation 16.1
 Average Salinity 0.47

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Table A-19 Homogenization temperature and salinity of fluid inclusions of quartz sample

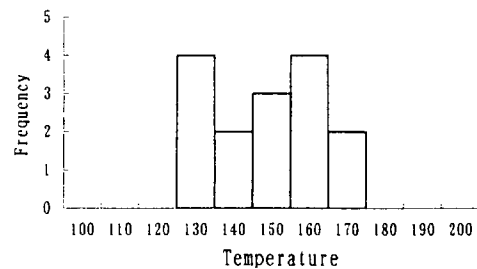
Phase II survey

(11/11)

Sample: M00TM166

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	5.0	12	po	165	-0.4	0.71
2	Quartz	2.5	10	po	143	-0.4	0.88
3	Quartz	< 2.5	10	eg	150	.	.
4	Quartz	< 2.5	7	eg	135	.	.
5	Quartz	5.0	12	po	150	-0.7	1.23
6	Quartz	2.5	10	eg	158	.	.
7	Quartz	< 2.5	10	eg	172	.	.
8	Quartz	< 2.5	10	eg	176	.	.
9	Quartz	5.0	12	wg	164	-0.3	0.53
10	Quartz	< 2.5	10	eg	138	.	.
11	Quartz	< 2.5	7	eg	132	.	.
12	Quartz	< 2.5	7	eg	138	.	.
13	Quartz	2.5	10	po	162	-0.2	0.35
14	Quartz	< 2.5	10	po	166	.	.
15	Quartz	< 2.5	7	eg	143	.	.

eg:egg-shape, irr:irregular, po:polygon, sq:square, tr:triangle, tu:tube, wg:wedge-shap



Mineral Quartz
 Inclusions 15
 Maximum 176 °C
 Minimum 132 °C
 Average 152.8 °C
 Deviation 13.8
 Average Salinity 0.74

Table A-20 K-Ar radiometric age

Phase I servey

Sample	K(wt%)	nL/g	⁴⁰ Ar (radiogenic)	
			%Total	Age (Ma)
M99MZ051R (Biot conc)	1.66	15.2603	73	223 ± 6
M99MZ051R (fsp+qtz conc)	2.66	22.0850	56	202 ± 4

Decay constant ⁴⁰K: $\lambda_{\beta} = 0.4962 \times 10^{-9}$, $\lambda_e = 0.581 \times 10^{-10} \text{ yr}^{-1}$.

Isotopic abundance: ⁴⁰K/K = 0.01167% (atomic).

Errors are 2 standard deviations.

Biot conc sample has an error of 2.7%. The analyst suspects that the error is slightly larger in this sample because of some chlorite contaminant within the the biotite.

Sample(Bulk)	K(wt%)	nL/g	⁴⁰ Ar (radiogenic)	
			%Total	Age (Ma)
M99NK041	1.80	15.5539	49	210 ± 4
M99NK052	2.36	27.9509	65	282 ± 6
M99NK067	2.35	18.7434	50	195 ± 4
M99NK083	2.17	18.3144	43	205 ± 4

Decay constants ⁴⁰K: $\lambda_{\beta} = 0.4962 \times 10^{-9}$, $\lambda_e = 0.581 \times 10^{-10} \text{ yr}^{-1}$.

Isotopic abundance: ⁴⁰K/K = 0.01167% (atomic).

Errors are 2 standard deviations.

Table A-20 K-Ar radiometric age

Phase II survey

No.	Sample No.	District	Occurrence	Rock Name	General Description	Alteration	Material Analyzed	Isotopic Age (Ma)	Ar ⁴⁰ (scc/g×10 ⁻⁵)	%Ar ⁴⁰	%K
1	M00NK100	Erdenet West	Bulgan NW	Trachy andesite	Unaltered, massive		Whole Rock	182±9	3.03	98.8	4.00
									2.93	98.8	4.00
2	M00NK165	Erdenet West	Zhuukhiin gol	Andesite	Unaltered, dark greyish		Whole Rock	229±11	1.46	92.9	1.54
									1.47	92.7	1.54
3	M00TM128	Tavt	Ereen No.42 ore body	Granodiorite	Weak altered (epidote, chlorite), coarse grain, biotite, plagio, quartz, k-feld		Whole Rock	330±16	2.30	97.2	1.65
									2.34	96.9	1.65
4	M00TM129	Tavt	Ereen No.1 ore body	Diorite	Altered (epidote, chlorite, sericite, quartz), fine grain		Whole Rock	247±12	0.95	95.9	0.93
									0.96	96.3	0.93
5	M00MZ113	Tosontsengel	Naranbulag	Granodiorite	---	unaltered	Whole Rock	110±6	1.86	98.8	4.15
									1.81	98.8	4.14
6	M00TM110	Murun West	Tsagaan tolgoi	Granitic rock	mediun grain, pale grinish, , rare mafic mineral, phenocryst: quartz, feldsper	strong greisenization (muscovite), silicification, quartz vein, limonitization	Muscovite	518±26	5.57	94.6	2.38
									5.52	95.3	2.37
7	M00TM130	Tavt	Ereen No.1 ore body	Quartz vein	coarse grain, clear, host: granite	muscovite, host: K-silicate alteration	Muscovite	276±14	6.58	97.6	5.67
									6.53	98	5.65

Table A-21 Calculation of $\delta^{18}\text{O}$ water based on the isotopic data and fluid inclusion data

Phase I survey

Sample	Area	Type	$\delta^{18}\text{O}(\text{‰})_{\text{qz}}$	Range T°C	Average T°C	$\delta^{18}\text{O}(\text{‰})_{\text{qz-water}}$	$\delta^{18}\text{O}(\text{‰})_{\text{water}}$	NaCl (wt%)
M99NK003M	Zaamar	quartz vein	15.1	136~184	158.2	14.7	0.4	3.60
M99NK003M	Zaamar	quartz vein	15.3	136~184	158.2	14.7	0.6	3.60
M99NK003M	Zaamar	quartz vein	16.2	136~184	158.2	14.7	1.5	3.60
M99NK003M	Zaamar	quartz vein	16.6	136~184	158.2	14.7	1.9	3.60
M99NK005M	Zaamar	quartz vein	18.6	109~151	127.2	17.5	1.1	2.51
M99NK005M	Zaamar	quartz vein	18.6	109~151	127.2	17.5	1.1	2.51
M99NK005M	Zaamar	quartz vein	18.7	109~151	127.2	17.5	1.2	2.51
M99NK005M	Zaamar	quartz vein	18.7	109~151	127.2	17.5	1.2	2.51
M99MZ008M	Altgana Gol	quartz vein	7.6	142~206	183.0	12.8	-5.2	9.34
M99MZ008M	Altgana Gol	quartz vein	7.9	142~206	183.0	12.8	-4.9	9.34
M99MZ008M	Altgana Gol	quartz vein	8.4	142~206	183.0	12.8	-4.4	9.34
M99MZ016M	Erdenet NW	quartz vein	4.3	132~172	151.2	15.3	-11.0	1.97
M99MZ016M	Erdenet NW	quartz vein	4.9	132~172	151.2	15.3	-10.4	1.97
M99MZ016M	Erdenet NW	quartz vein	5.5	132~172	151.2	15.3	-9.8	1.97
M99MZ016M	Erdenet NW	quartz vein	5.9	132~172	151.2	15.3	-9.4	1.97
M99MZ065M	Tsookher Merit	quartz vein	3.0	145~195	169.3	13.8	-10.8	0.16
M99MZ065M	Tsookher Merit	quartz vein	4.5	145~195	169.3	13.8	-9.3	0.16
M99MZ065M	Tsookher Merit	quartz vein	5.8	145~195	169.3	13.8	-8.0	0.16

$\delta^{18}\text{O}(\text{‰})_{\text{qz-water}}$: Oxygen isotopic fractionation factor between quartz and water (Matsuhisa et al., 1979).

$\delta^{18}\text{O}(\text{‰})$ values of muscovite in quartz vein of M99NK003M are +11.8‰ to +11.9‰, calculated temperature by oxygen isotopic fractionation factor between quartz and muscovite (Kieffer, 1982) are 144°C to 230°C.

Table A-21 Calculation of $\delta^{18}\text{O}$ water based on the isotopic data and fluid inclusion data

Phase II survey

Sample No.	District	Occurrence	Sample type	$\delta^{18}\text{O}(\text{‰})_{\text{qz}}$	Range T(°C)	Average T(°C)	$\delta^{18}\text{O}(\text{‰})_{\text{quartz-water}}$	$\delta^{18}\text{O}(\text{‰})_{\text{water}}$	NaCl (wt%)
M00MZ120	Tsagaan uul	Gurvan buudal uul	Quartz vein	19.74	187~247	215.7	10.7	9.1	3.23
M00MZ149	Tavt	Ereen No.1 ore body	Quartz vein	15.03	103~163	124.1	17.9	-2.8	1.88
M00MZ151	Tavt	Ereen No.1b ore body	Quartz vein	12.05	98~158	124.4	17.8	-5.8	5.42
M00MZ155	Tavt	Ereen No.3 ore body	Quartz vein	11.91	198~273	240.5	9.4	2.6	0.26
M00MZ162	Erdenet West	Erdenet NW	Quartz vein	4.41	136~182	157.4	14.7	-10.3	1.82
M00MZ163	Erdenet West	Erdenet NW	Quartz vein	2.22	106~152	129.8	17.3	-15.1	0.75
M00MZ177	Erdenet West	Khujiriin gol	Quartz vein	-10.99					
M00HH202	Erdenet West	Khujiriin gol	Quartz vein	-8.22					

$\delta^{18}\text{O}(\text{‰})_{\text{qz-water}}$: Oxygen isotopic fractionation factor between quartz and water (Matsuhisa et al., 1979).

Table A-22 Measurement of $\delta^{34}\text{S}$ for granitic rocks and pyrite

Sample No.	District	Occurrence	Sample type	Mineralization	$\delta^{34}\text{S}$ (‰)	S (%)
M99HH008R	Erdenet	Erdenet NW	Selenge Complex	-	7.2	0.005
M99MZ017R	Erdenet	Erdenet NW	Erdenet Complex	+	-1.8	0.17
M99MZ041R	Erdenet	Erdenet SE	Erdenet Complex	+	-4.8	1.25
M99MZ044R	Erdenet	Erdenet SE	Selenge Complex	-	3.3	0.001
M99MZ036R	Erdenet	Under	Selenge Complex	-	4.6	0.01
M99MZ039R	Erdenet	Under	Erdenet Complex	-	3.8	0.001
M99MZ016M	Erdenet	Erdenet NW	Pyrite		-0.7	
M99MZ016M	Erdenet	Erdenet NW	Pyrite		-0.5	
M99MZ016M	Erdenet	Erdenet NW	Pyrite		-0.5	
M00MZ154	Tavt	Ereen	Granodiorite	-	11.6	
M00MZ156	Tavt	Ereen	Diorite	-	5.9	

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APPENDIX 5

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Table A-23 List of granitic and volcanic rocks for examination of petrological chemistry

(1/2)

Granitic rocks

Sample	District	Occurrence	Rock Name	General Description	Alteration and Mineralization	Type	Geologic age	Biotite	Apatite
M00NK102	Erdenet West	Bulgan NW	Granitoid	equigranular	unaltered		Permian		
M00MZ132	Erdenet West	Bulgan NW	Diorite		unaltered		Permian-Jurassic		
M99MZ054R	Bulgan West	Burged khyr	Granitic rock		relatively unaltered? (limonite)		Permian-Triassic		
M99RK030R	Erdenet	Erdenet Central	Granite	biotite+plagioclase+quartz+k-feldsper	relatively unaltered (quartz vein in)	Selenge complex	Permian-Triassic		
M99HH008R	Erdenet	Erdenet NW	Granite-Granodiorite	holocrystalline/int.~coarse	unaltered	Selenge complex	Permian-Triassic		
M00HH119	Tsagaan uul	Khunkh tsakhir	Granite	drill core (quartz, feldsper, biotite)	unaltered		Permian		
M00HH109	Tosontsengel	Naranbulag	Granite	float in trench, (fine grained)	unaltered		Permian		
M00MZ113	Tosontsengel	Naranbulag	Granodiorite		unaltered		Permian-Triassic		
M99MZ043R	Erdenet	Oyut (Erdenet SE)	Granodiorite porphyry		relatively unaltered	Erdenet complex	Permian-Triassic		
M99MZ044R	Erdenet	Oyut (Erdenet SE)	Granodiorite		unaltered	Selenge complex	Permian-Triassic		
M99RK025R	Erdenet	SAR144	Granite	plagioclase+biotite+quartz+k-feldsper	potassic(k-feldsper+biotite) alteration, limonite, malachite along fracture	Selenge complex	Permian-Triassic		
M99NK059R	Erdenet	Tourmarine	Granite		unaltered		Permian-Triassic		
M99NK061R	Erdenet	Tourmarine	Granite		unaltered		Permian-Triassic	Unaltered	Rare
M99MZ036R	Erdenet	Under	Granodiorite		relatively unaltered (k-feldsper, epidote)	Selenge complex	Permian-Triassic		
M99MZ039R	Erdenet	Under	Quartz porphyry		relatively unaltered	Erdenet complex	Permian-Triassic		
M00NK106	Erdenet West	Undrakh	Granitoid		unaltered		Permian		
M99RK032R	Erdenet	Erdenet Central	Diorite	fine grained, phenocryst: biotite+plagioclase	epidote, limonite, malachite along crack	Erdenet complex ?	Permian-Triassic		
M99HH011R	Erdenet	Erdenet NW	Granodiorite		pyrite, malachite	Erdenet complex	Permian-Triassic	Altered	Rare
M99MZ015R	Erdenet	Erdenet NW	Granitic rock		phyllitic alteration, pyrite and chalcopyrite dissemination	Erdenet complex	Permian-Triassic	Absence	Absence
M99MZ017R	Erdenet	Erdenet NW	Granitic rock		potassic alteration, pyrite dissemination	Erdenet complex	Permian-Triassic		
M99MZ057R	Bulgan West	Nomgon	Granitic rock		magnetite rich	Selenge complex	Permian-Triassic		
M99MZ059R	Bulgan West	Nomgon	Granitic rock		replacement, magnetite rich (magnetite after mafic)	Selenge complex	Permian-Triassic		
M99MZ042R	Erdenet	Oyut (Erdenet SE)	Granodiorite porphyry		phyllitic alteration	Erdenet complex	Permian-Triassic		
M99RK044R	Erdenet	SAR127	Granodiorite	equigranule, coarse grained, biotite+plagioclase+k-feldsper	unaltered	Selenge complex ?	Permian-Triassic		

Table A-23 List of granitic and volcanic rocks for examination of petrological chemistry

Volcanic rocks

Sample	District	Occurrence	Rock Name	General Description	Alteration and Mineralization	Geologic age
M00NK100	Erdenet West	Bulgan NW	Trachy andesite	massive	unaltered	Permian
M99NK083R	Bulgan	Khar uul	Andesite		unaltered	Permian
M99NK052R	Erdenet	SAR139	Basalt	dyke	unaltered	Carboniferous-Permian?
M99HH014R	Erdenet	SAR139	Basalt	gray	silicification, quartz+epidote vein	Carboniferous-Permian?
M99NK067R	Erdenet	Zaluu	Basaltic andesite		unaltered	Jurassic (Permian?)
M00NK101	Erdenet West	Bulgan NW	Basalt	aphanitic	unaltered	Permian
M99HH010R	Erdenet	Erdenet NW	Andesite	dyke, gray, aphanitic	unaltered	Permian-Triassic
M99HH012R	Erdenet	Erdenet NW	Andesite	dyke, dark green	relatively unaltered (pyrite)	Permian-Triassic
M99NK041R	Erdenet	Talbulag	Tuff breccia	andesitic	unaltered	Triassic
M99MZ045R	Erdenet	SAR233	Volcanic rock		silicification	Cambrian-Ordovician

unaltered Volcanic rocks (examination of petrological chemistry)

Altered and mineralized volcanic rocks

Table A-23 List of granitic and volcanic rocks for examination of petrological chemistry

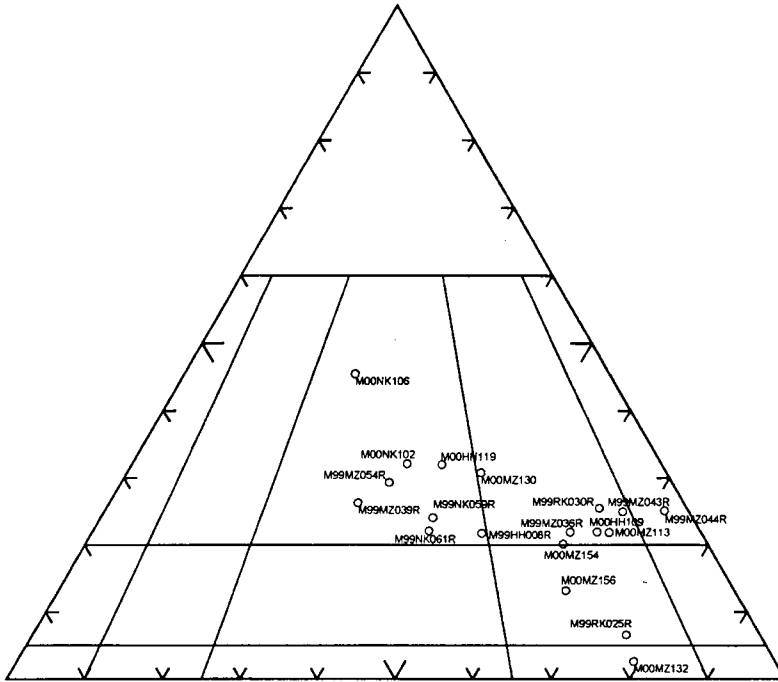
Volcanic rocks

Sample	District	Occurrence	Rock Name	General Description	Alteration and Mineralization	Geologic age
M00NK100	Erdenet West	Bulgan NW	Trachy andesite	massive	unaltered	Permian
M99NK083R	Bulgan	Khar uul	Andesite		unaltered	Permian
M99NK052R	Erdenet	SAR139	Basalt	dyke	unaltered	Carboniferous-Permian?
M99HH014R	Erdenet	SAR139	Basalt	gray	silicification, quartz+epidote vein	Carboniferous-Permian?
M99NK067R	Erdenet	Zaluu	Basaltic andesite		unaltered	Jurassic (Permian?)
M00NK101	Erdenet West	Bulgan NW	Basalt	aphanitic	unaltered	Permian
M99HH010R	Erdenet	Erdenet NW	Andesite	dyke, gray, aphanitic	unaltered	Permian-Triassic
M99HH012R	Erdenet	Erdenet NW	Andesite	dyke, dark green	relatively unaltered (pyrite)	Permian-Triassic
M99NK041R	Erdenet	Talbulag	Tuff breccia	andesitic	unaltered	Triassic
M99MZ045R	Erdenet	SAR233	Volcanic rock		silicification	Cambrian-Ordovician

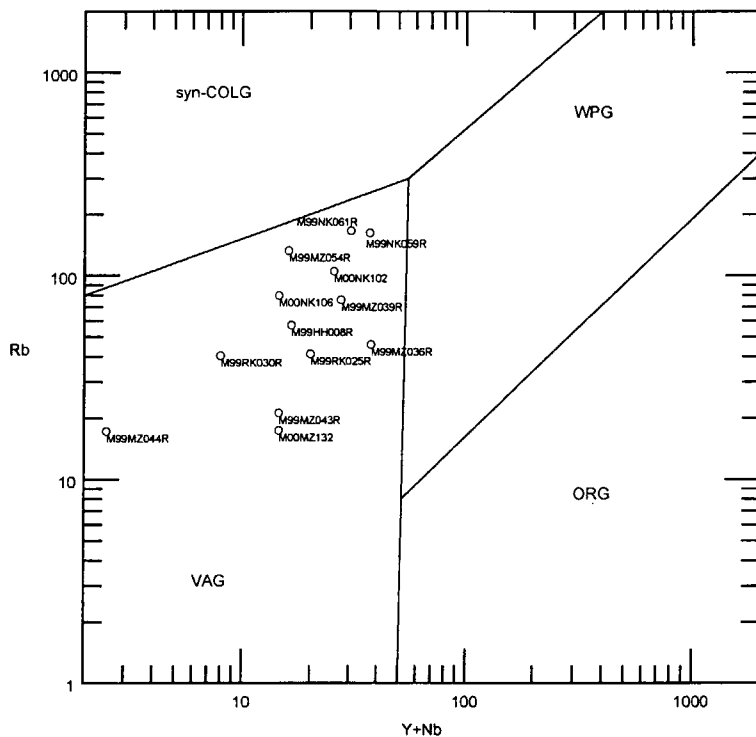
unaltered Volcanic rocks (examination of petrological chemistry)

Altered and mineralized volcanic rocks

Granitic rocks



Quartz - Alkali feldspar - Plagioclase diagram

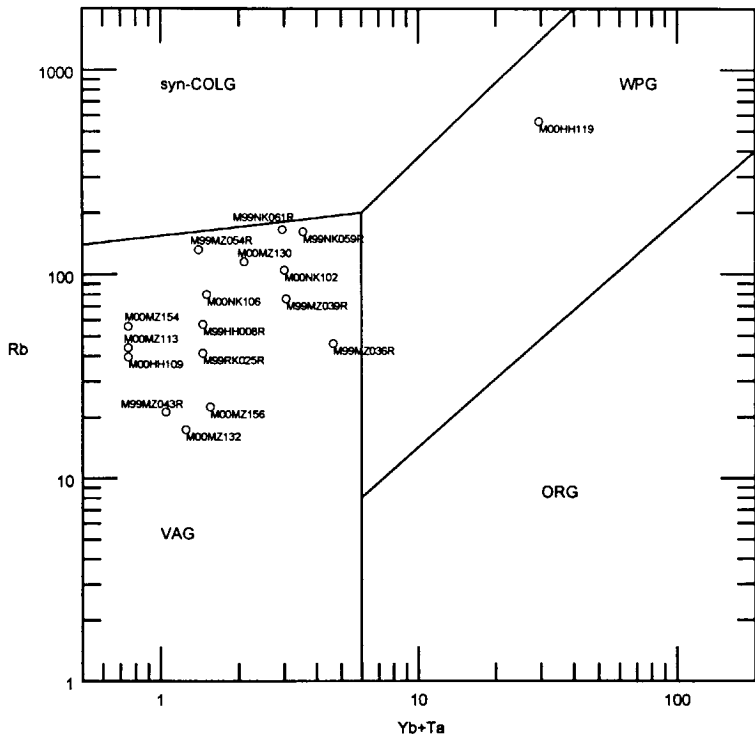


VAG: volcanic arc granites
 syn-COLG: syn-collision granites
 WPG: within plate granites
 ORG: ocean ridge granites

Rb - (Y+Nb) diagram (Pearce et al., 1984)

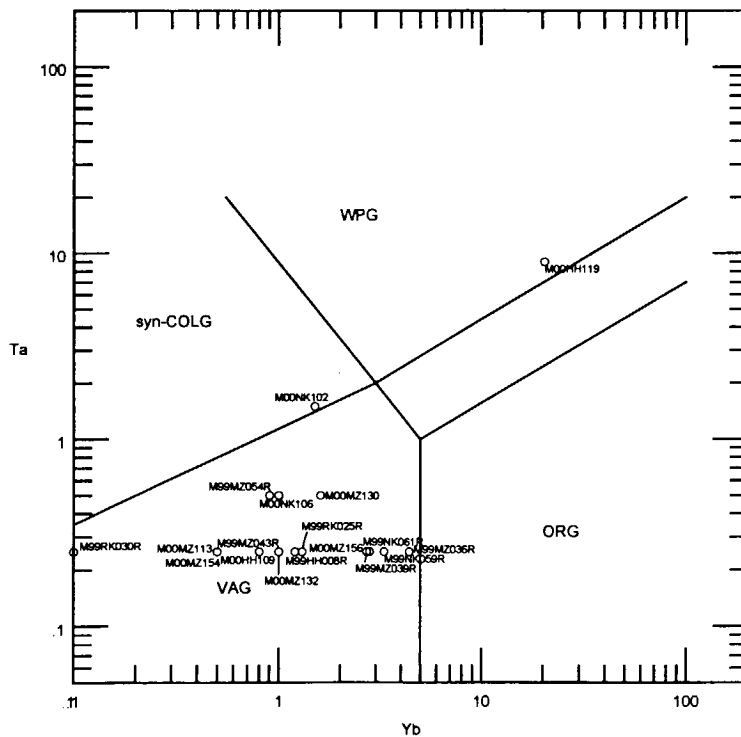
Fig. A-4 Diagrams for examination of petrological chemistry

Granitic rocks



VAG: volcanic arc granites
 syn-COLG: syn-collision granites
 WPG: within plate granites
 ORG: ocean ridge granites

Rb - (Yb+Ta) diagram (Pearce et al., 1984)

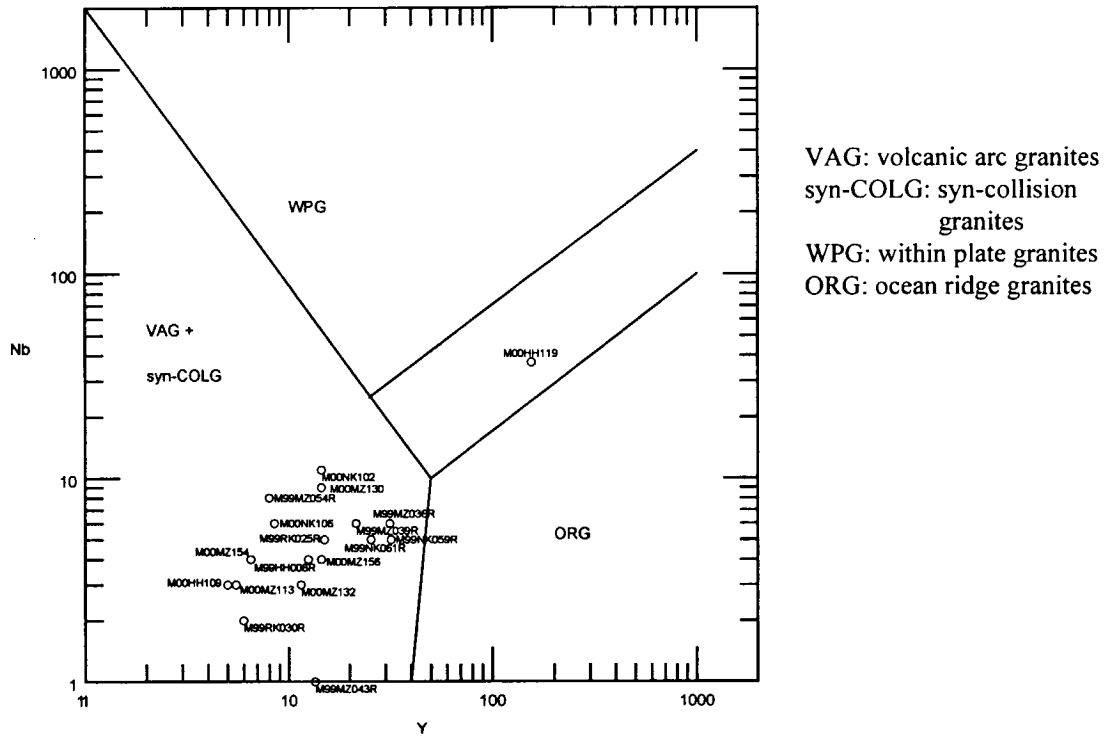


VAG: volcanic arc granites
 syn-COLG: syn-collision granites
 WPG: within plate granites
 ORG: ocean ridge granites

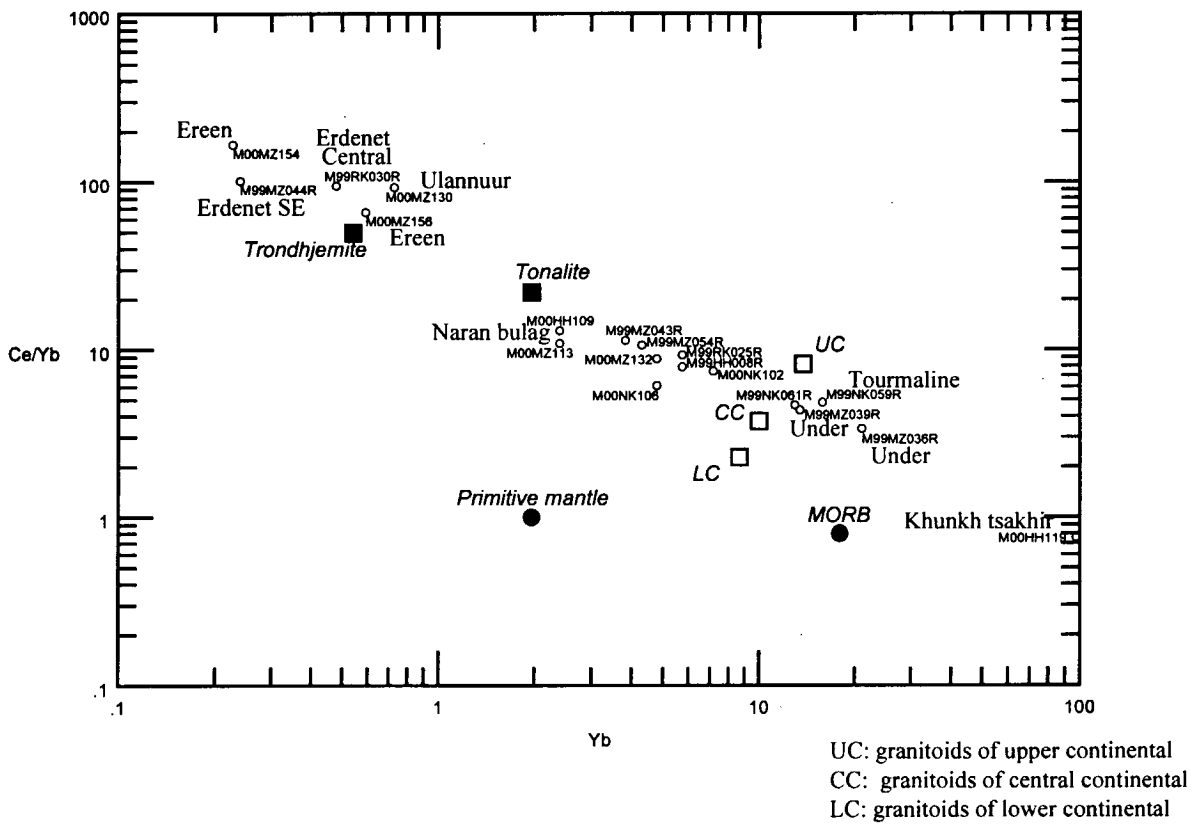
Ta - Yb diagram (Pearce et al., 1984)

Fig. A-4 Diagrams for examination of petrological chemistry

Granitic rocks



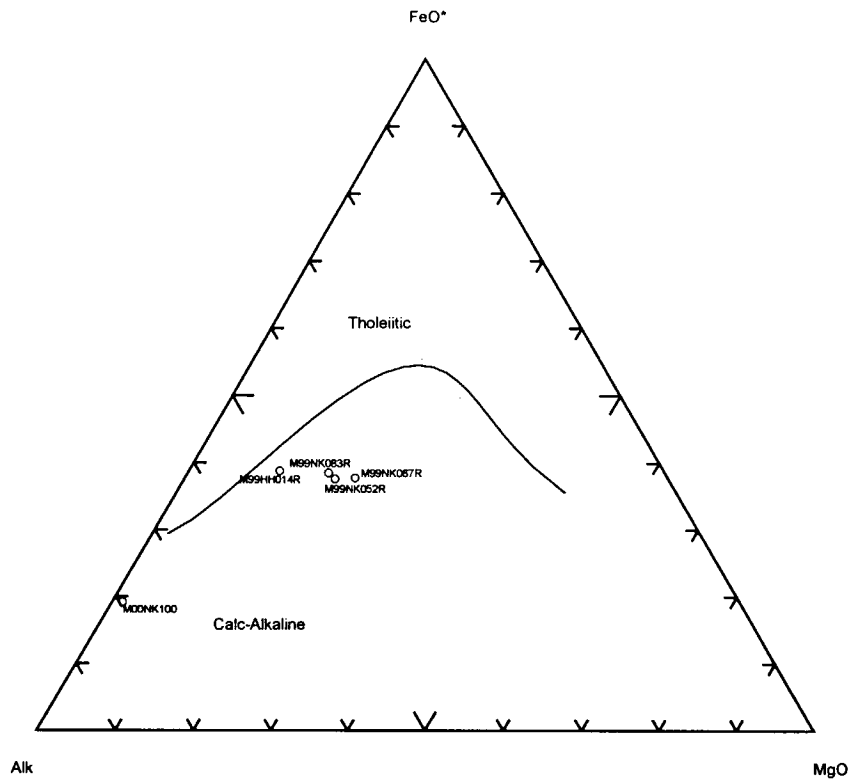
Nb - Y diagram (Pearce et al., 1984)



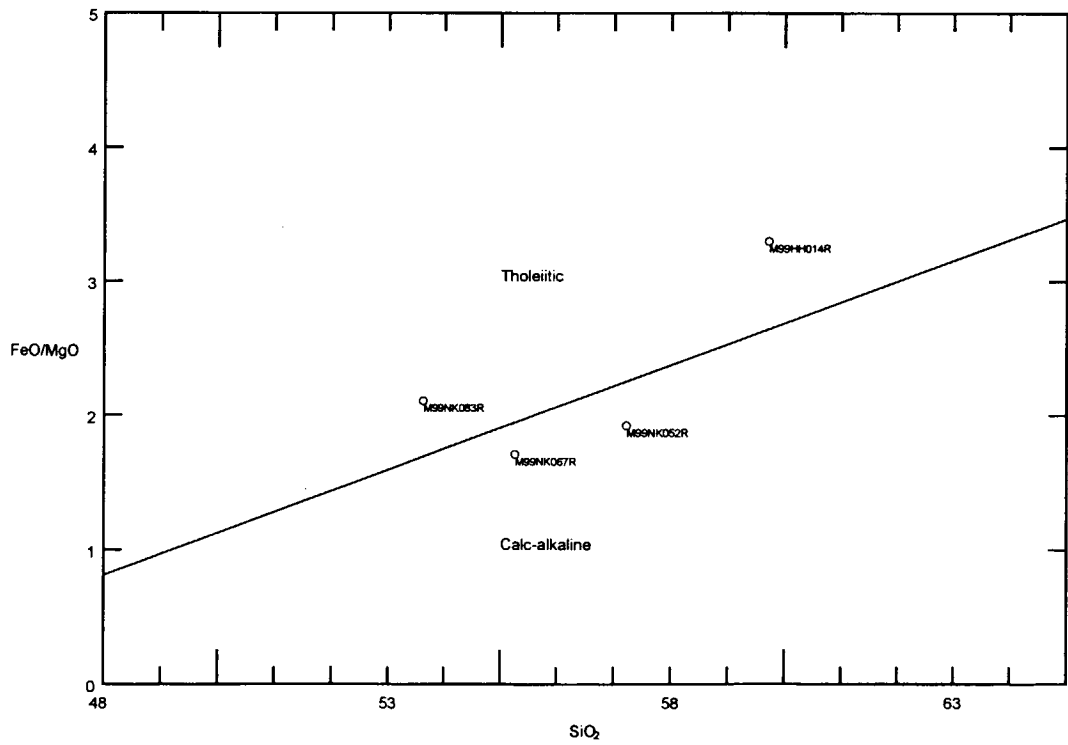
Chondrite normalized Ce/Yb - Yb diagram

Fig. A-4 Diagrams for examination of petrological chemistry

Volcanic rocks



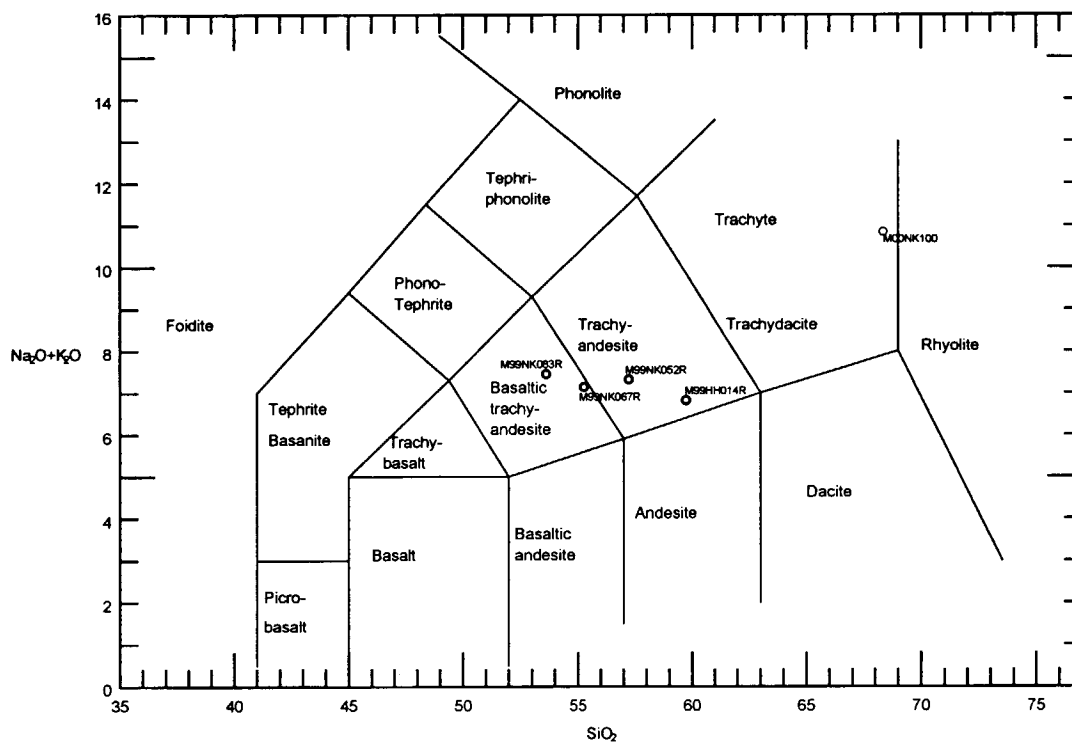
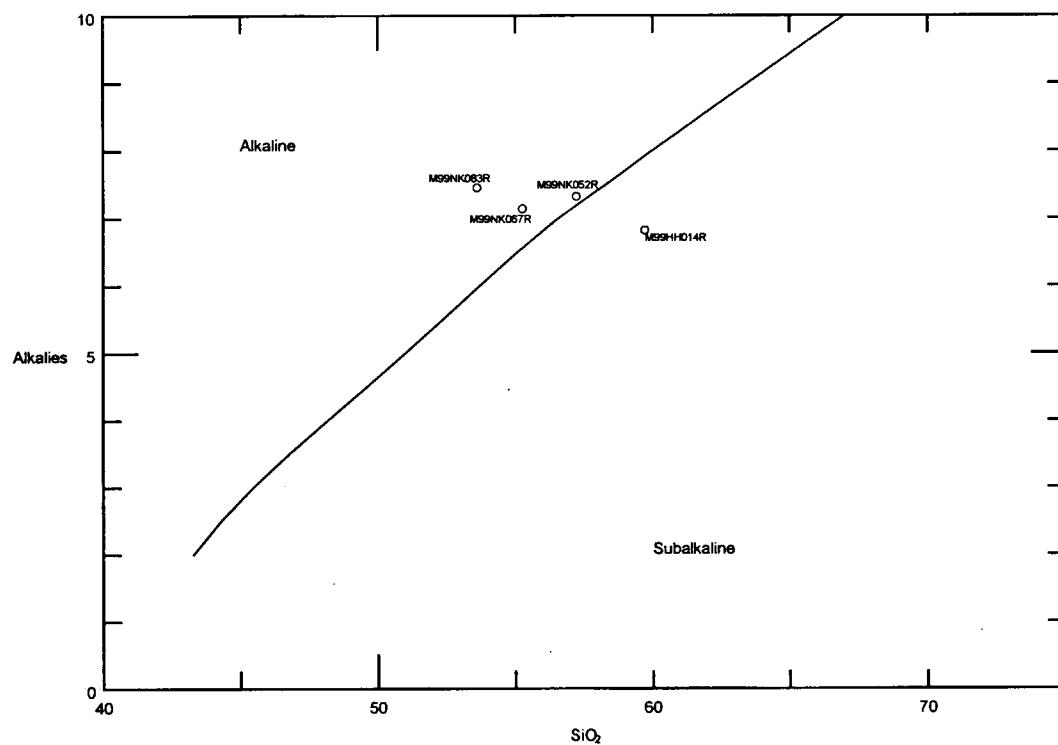
Alkali (Na₂O+K₂O) - FeO* - MgO diagram



FeO*/MgO - SiO₂ diagram

Fig. A-4 Diagrams for examination of petrological chemistry

Volcanic rocks



(Na₂O+K₂O) - SiO₂ diagram

Fig. A-4 Diagrams for examination of petrological chemistry

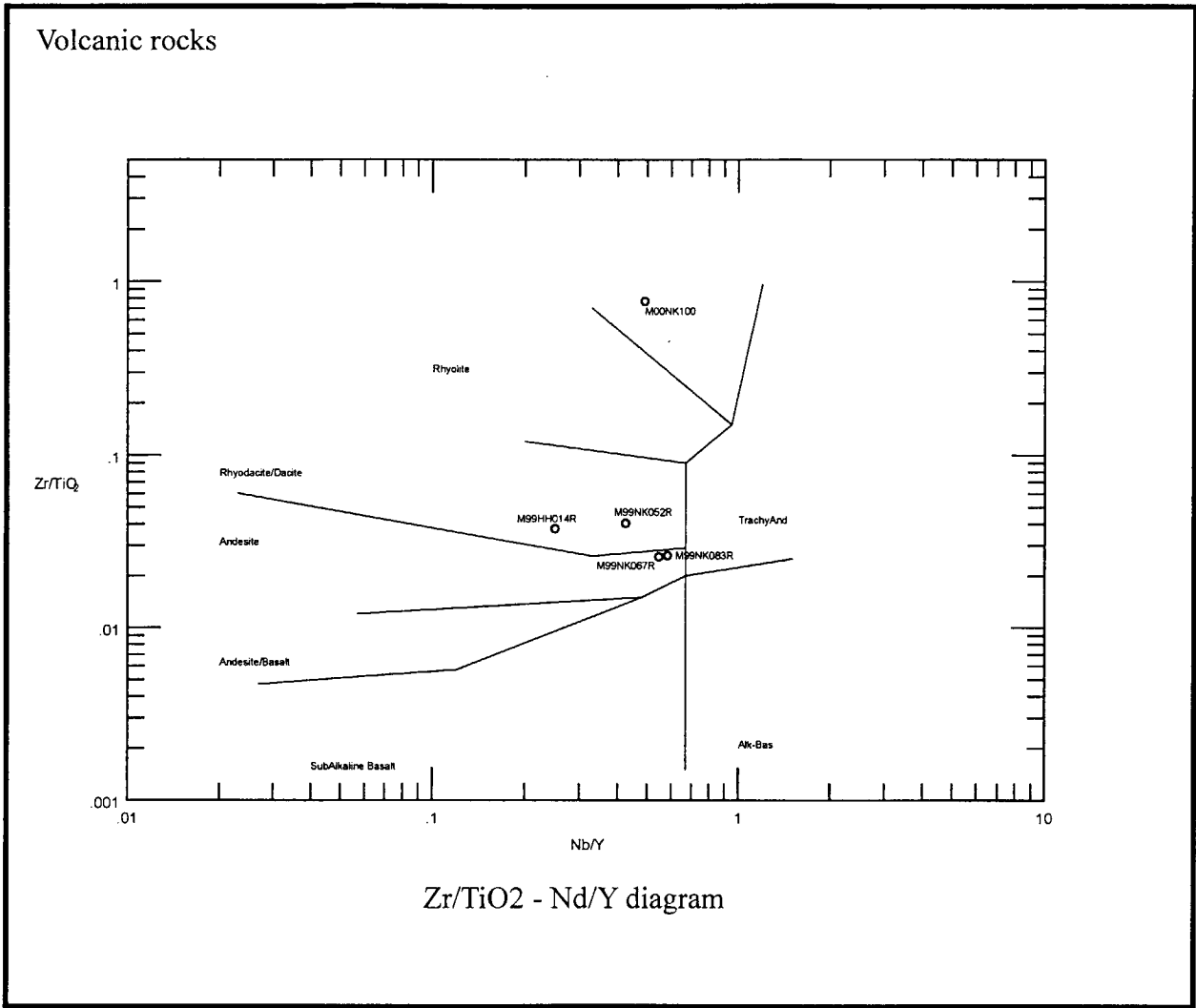


Fig. A-4 Diagrams for examination of petrological chemistry

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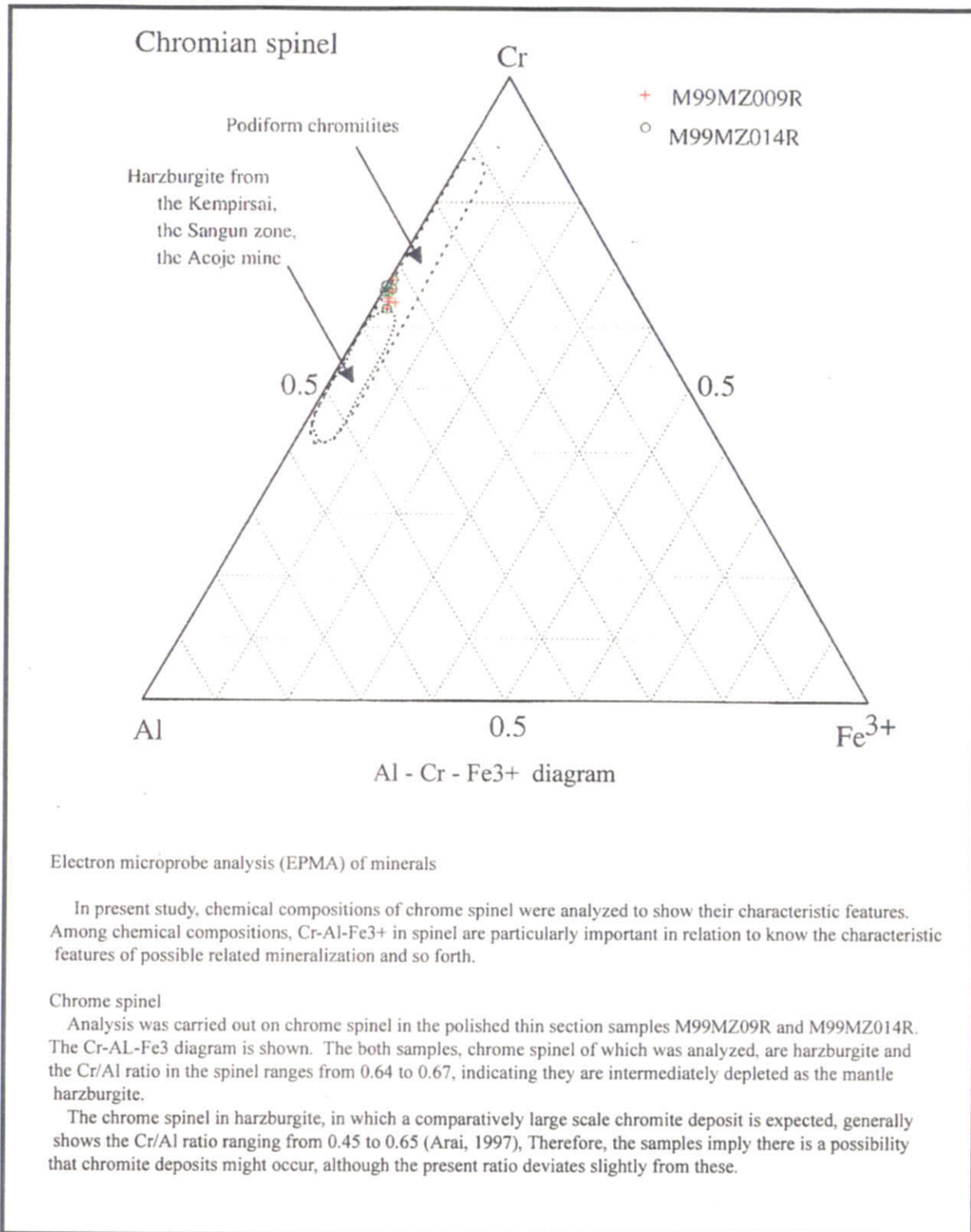


Fig. A-5 Diagrams of electron microprobe analysis for chromian spinel

APPENDIX 6

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Plate 1
Zelter district, Occurrence 24 (No.1)

Over view of investigated area



Plate 2
Zelter district, Occurrence 24 (No.1)

Outcrop of silicified and epidotized rock



Plate 3
Zelter district, Gatsuurkhan (No.2)

Over view of investigated site



Plate 4
Zelter district, Gatsuurkhan (No.2)

Outcrop of brecciated silicified rock.
Original rock is dacite.

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Plate 5
Erdenet West district, SAR139 (No.3)

Over view of investigated site



Plate 6
Erdenet West district, SAR139 (No.3)

Old trench located in the investigated site



Plate 7
Erdenet West district, SAR139 (No.3)

Panoramic view of the investigated area



Plate 8
Erdenet West district, SAR139 (No.3)

Silicified rock with malachite mineralization distributed in old small pits



Plate 9
Erdenet West district, Zuukhiin gol (No.6)

Over view of the investigated site.
Old trench is located in the survey site.



Plate 10
Erdenet West district, Zuukhiin gol (No.6)

Old trench.
Granodiorite with malachite mineralization is distributed around this trench.



Plate 11
Erdenet West district, Mogoin gol 2 (No.10)

Outcrop of silicified rock ("secondary quartzite")



Plate 12
Erdenet West district, Khujiriin gol (No.11)

Panoramic view of the investigated site



Plate 13
Erdenet West district, Khujiriin gol (No.11)

Quartz vein with malachite mineralization



Plate 14
Erdenet West district, Tsagaan chuluut (No.12)

Over view of the investigated site



Plate 15
Erdenet West district, Tsagaan chuluut (No.12)

Panoramic view of the investigated site

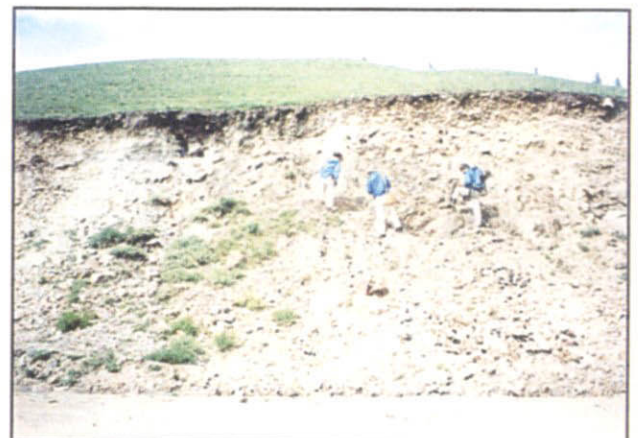


Plate 16
Erdenet West district, Tsagaan chuluut (No.12)

Outcrop of silicified and white argillized volcanic rocks

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Plate 17
Erdenet West district, Tsagaan chuluut (No.12)

Intensive silicified rock distributed in the investigated area.



Plate 18
Erdenet West district, Tsagaan chuluut (No.12)

Outcrop of intensive silicified rock in *Talbulag*.



Plate 19
Erdenet West district, Erdenet NW (No.13)

Open pit of Erdenet mine.



Plate 20
Erdenet West district, Erdenet NW (No.13)

SX-EW plant (Leaching facility).



Plate 21
Erdenet West district, Erdenet NW (No.13)

SX-EW plant (EW facility).



Plate 22
*Erdenet West district,
 Erdenet NW (No.13)-Central (No.14)-Oyut(SE; No.16)*

Panoramic view of the Erdenet deposits.



Plate 23
Erdenet West district, Erdenet Central (No.14)

Weak silicified granite with Cu-oxide stain along crack.



Plate 24
Erdenet West district, Oyut (Erdenet SE; No.16)

Argillized and limonitized rocks in leached zone



Plate 25
Erdenet West district, Tourmaline (No.17)

Over view of investigated site.
 Old trenches located in the investigated area.



Plate 26
Erdenet West district, Tourmaline (No.17)

Fine grain tourmaline disseminates within matrix of brecciated syenogranite.



Plate 27
Erdenet West district, Under (No.20)

Over view of the investigated site.

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Plate 28
Erdenet West district, Danbatseren (No.27)

Panoramic view of the investigated area.



Plate 29
Erdenet West district, Danbatseren (No.27)

Over view of the investigated site.
Silicified rock are scattered in this site.



Plate 30
Erdenet West district, Tsookher mert (No.42)

Over view of the investigated site.



Plate 31
Erdenet West district, Tsookher mert (No.42)

Old trench located in this site.



Plate 32
Erdenet West district, Tsookher mert (No.42)

Outcrop of granite with gold mineralized quartz vein
(width: 1-10cm).



Plate 33
Erdenet West district, Burged khyr (No.45)

Old trench located in the investigated site.



Plate 34
Erdenet West district, Undrakh (No.49)

Over view of the investigated site



Plate 35
Erdenet West district, Undrakh (No.49)

Small stock of fine grained granite with quartz vein.



Plate 36
Erdenet West district, Undrakh (No.49)

Potassic altered granite with Cu-oxide stain and quartz vein with chalcopyrite



Plate 37
Erdenet West district, Bulgan NW (No.50)

Outcrop of black shale intruded by diorite.

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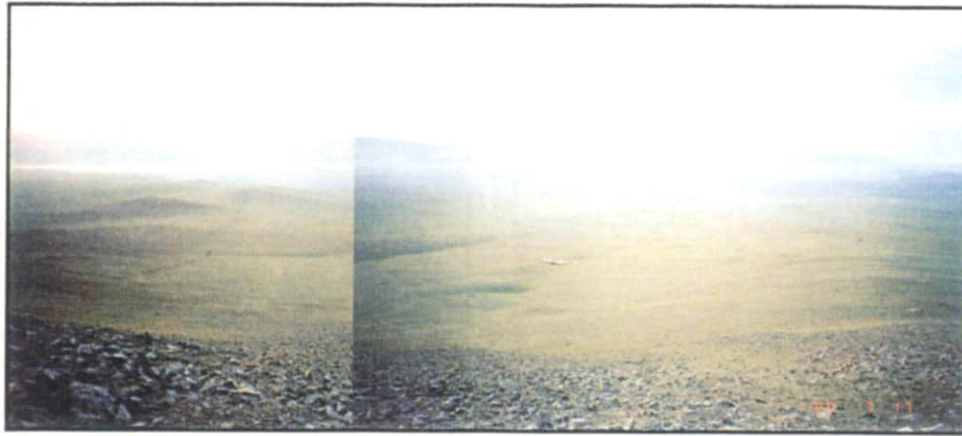


Plate 38
Bulgan SW district, Oyuut khonkhor (No.58)

Panoramic view of investigated site



Plate 39
Bulgan SW district, Oyuut khonkhor (No.58)

Old open pit.



Plate 40
Bulgan SW district, Oyuut khonkhor (No.58)

Old trench.
 Silicified and white argillized volcanic rocks
 are distributed around trench.



Plate 41
Bulgan SW district, Oyuut khonkhor (No.58)

Silicified volcanic rocks distributed in northeastern
 part of investigated area.



Plate 42
Tavt district, Teshig (No.60)

Over view of the investigated site.



Plate 43
Tavt district, Teshig (No.60)

Outcrop of skarn (silicification and epidotization) with magnetite



Plate 44
Tavt district, Ereen (No.61)

No.1 ore body.



Plate 45
Tavt district, Ereen (No.61)

No.2 ore body.



Plate 46
Tavt district, Ereen (No.61)

No.3 ore body.



Plate 47
Tavt district, Ereen (No.61)

No.3 ore body.

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Plate 48
Tavt district, Ereen (No.61)

Ore samples: gossan type and quartz vein type



Plate 49
Tavt district, Ereen (No.61)

Test plant of mineral processing.



Plate 50
Tariat district, Terkhiin tsagaan nuur (No.85)

Over view of the investigated site.



Plate 51
Tariat district, Terkhiin tsagaan nuur (No.85)

Quartz vein hosted in sedimentary rocks.



Plate 52
Tariat district, Terkhiin tsagaan nuur (No.85)

Wolframite (black mineral) in quartz vein.



Plate 53
Tariat district, Tariatiin gol (No.86)

White alteration zone distributed around investigated site.



Plate 54
Tariat district,

Quartz mass distributed near Tariatiin gol mineral occurrence.



Plate 55
Tariat district, Solongot (No.87)

Alteration zone (skarnization). Limestone intruded by granite is distributed around survey site.

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3
3



Plate 56
Murun West district, Tsagaan tolgoi (No.89)

Over view of the investigated site.



Plate 57
Murun West district, Tsagaan tolgoi (No.89)

Quartz mass (silica cap?).



Plate 58
Murun West district, Tsagaan tolgoi (No.89)

Brecciated quartz vein.

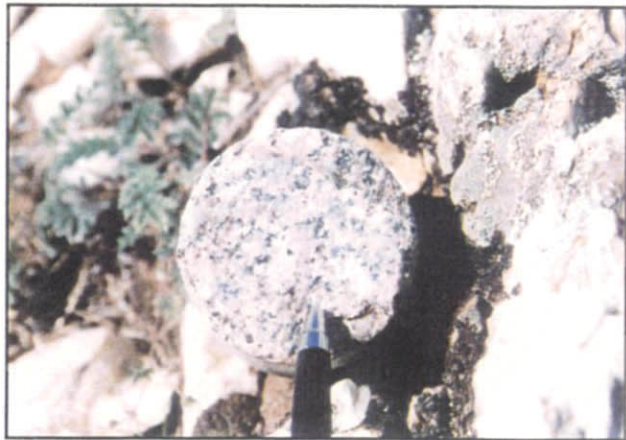


Plate 59
Murun West district, Tsagaan tolgoi (No.89)

Potassic altered granite (drilling core).



Plate 60
Murun West district, Ulaannuur (No.90)

Panoramic view of the investigated area.



Plate 61
Murun West district, Ulaannuur (No.90)

Silicified rock distributed in the investigated site.



Plate 62
Tsagaan uul district, Khaisiin belchir (No.91)

Over view of the investigated site.



Plate 63
Tsagaan uul district, Khaisiin belchir (No.91)

Outcrop of pelitic shist with quartz vein.



Plate 64
Tsagaan uul district, Tsagaan uul (No.92)

Panoramic view of the investigated area



Plate 65
Tsagaan uul district, Tsagaan uul (No.92)

Old trench in the survey site.



Plate 66
Tsagaan uul district, Nariin azarga (No.93)

Over view of the investigated site.



Plate 67
Tsagaan uul district, Nariin azarga (No.93)

Outcrop of limestone.

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Plate 68
Tsagaan uul district, Deed ulaan tolgoi (No.94)

Over view of the investigated site.

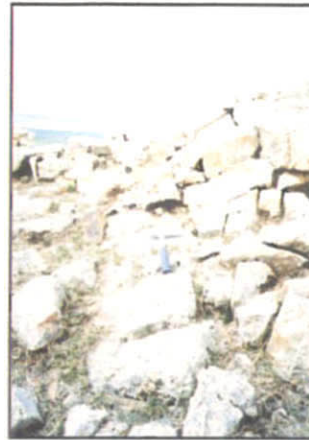


Plate 69
Tsagaan uul district, Deed ulaan tolgoi (No.94)

Outcrop of granite with quartz vein.

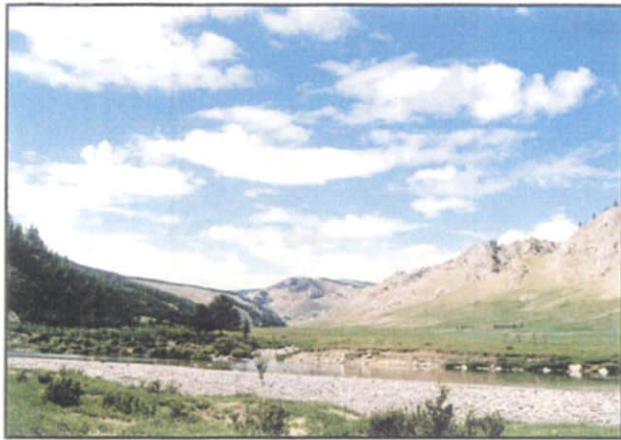


Plate 70
Tsagaan uul district, Deed ulaan tolgoi (No.93)

Panoramic view of the investigated site.

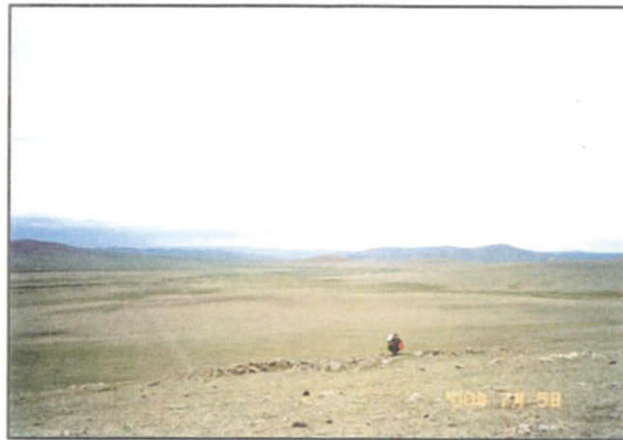


Plate 71
Tsagaan uul district, Ulaan zavsar (No.95)

Over view of the investigated site.



Plate 72
Tsagaan uul district, Gurvan buudal uul (No.96)

Over view of the investigated site.



Plate 73
Tsagaan uul district, Gurvan buudal uul (No.96)

Outcrop of meta-sediment with quartz vein.



Plate 74
Tsagaan uul district, Khunkh tsakhir (No.97)

Over view of the investigated site.



Plate 75
Tsagaan uul district, Khunkh tsakhir (No.97)

Old trench located in the survey site.



Plate 76
Tsagaan uul district, Khunkh tsakhir (No.97)

Outcrop of altered rock (greisen) with quartz fragment.



Plate 77
Tosontsengel district, Zost uul (No.98)

Old trench located in the survey site.



Plate 78
Tosontsengel district, Zost uul (No.98)

Old pit. Limestone is distributed around this pit.



Plate 79
Tosontsengel district, Khuurai sair (No.99)

Over view of the investigated site.

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Plate 80
Tosontsengel district, Khuurai sair (No.99)

View of the investigated site.



Plate 81
Tosontsengel district, Khuurai sair (No.99)

Silicified rock with azurite.



Plate 82
Tosontsengel district, Naranbulag (No.100)

Over view of the investigated site.



Plate 83
Tosontsengel district, Naranbulag (No.100)

Old trench in the servy site.



Plate 84
Tosontsengel district, Occurrence124-B-4,5 (No.101)

View of the investigated site.



Plate 85
Tosontsengel district, Occurrence124-B-4,5 (No.101)

Altered gabbro (epidotization).



Plate 86
Tosontsengel district, Quartzite (No.102)

Over view of the investigated site.

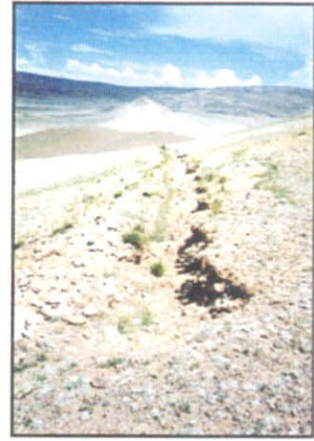


Plate 87
Tosontsengel district, Quartzite (No.102)

Old trench located in the survey site.



Plate 88
Tosontsengel district, Davaa (No.103)

Over view of the investigated site.



Plate 89
Tosontsengel district, Davaa (No.103)

Outcrop of granite with quartz network vein.

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