

Table A-6 List of geological maps around mineral occurrences of the survey area

Index No.	No. of Mineral Occurrences	Original title of the map (in Mongolian or Russian)	Name of the area (in English)	Scale	Published Year	Remarks
3-1	1	Геологический атлас района Замарын Хүдрийн Зангилаа (М)	Zaamar ore knot (Sundal N177)	1:50,000	1994	in Mongolian
3-2	1	Хүдэр Агуулагч Бичигтийн Ба Улаан Энгэрийн Бүс	Bichigt and Ulaan enger Zaamar	1:50,000	1994	in Mongolian
3-3	1	Геологийн Зураг: Заамарын Дүүрэг	Zaamar	1:50,000	unknown	
3-4	1	Геологийн Зураг: Хүдэр Агуулагч Цагаан Чулууны Бүс	Tsagaan chuluut	1:5,000	1994	in Mongolian
3-5	1	Геологийн Зураг: Нарийн Голын Алтны Хүдрийн Талбай	Nariingol	1:10,000	1994	in Mongolian
3-6	1	Геологийн Зураг: Хүдэр Агуулагч Дэл Сүдлын Бүс	Ore bearing dyke zone	1:10,000	1994	in Mongolian
3-7	1	Геологийн Зураг: Нарийн Голын Алтны Хүдрийн Талбай	Nariingol gold field	1:10,000	unknown	in Mongolian
3-8	1	1992-1993 Онуудад Явуулсан Зрлийн Ажлын үр Дүнгийн Тайлан	Nariingol gold ore field's result	1:10,000	1994	in Mongolian
3-9	2	Участок Улцэйтү-обо: Схематическая Геологическая Карта	Uziit ovoo	1:10,000	1987	in Russian
3-10	4	Участок Оюут-Хонхор: Схематическая Геологическая Карта	Ouyt-Khonkhor	1:10,000	1987	in Russian
3-11	8	Участка Могойи-гол: МГИ ГРПМНР Мурэнская ГСЭ, Схематическая Геологическая Карта	Mogoin gol	1:5,000	unknown	in Russian
3-12	8	Эрдэнтуинского Рудный Район, Участка Могойи-гол: Схематическая Геологическая Карта	Mogoin gol	1:25,000	1981	in Russian
3-13	9	Результаты Наземных Геолого-Геофизических Работ На Участке Холбо-Обо	Kholboo ovoo	1:10,000	1990	in Russian
3-14	10	Схематическая Геологическая Карта: Участкаг. Хо-Улан-Ула	Kho-ulaan	1:10,000	1974	in Russian
3-15	11	Схематическая Геологическая Карта: Геолого-Геофизические Разрезы: Участок Цэосоту-Тологой	Zost tolgoi	1:10,000	1984	in Russian
3-16	12	Схематическая Геологическая Карта Рудопоявления Меди Яргайт	Yargait	1:10,000	1984	in Russian
3-17	13	Схематическая Геологическая Карта: Участка Донхор-булак	Donkhor bulag	1:10,000	1974	in Russian
3-18	14	Схематическая Геологическая Карта: Молибденового Рудопоявления "Алтга"	Altavana gol	1:5,000	1986	in Russian
3-19	17	Схематический Геологический План: Участка "Дэлгэр-Уул"	Delger uul	不明	1986	in Russian

Table A-6 List of geological maps around mineral occurrences of the survey area (2/2)

Index No.	No. of Mineral Occurrences	Original title of the map (in Mongolian or Russian)	Name of the area (in English)	Scale	Published Year	Remarks
3-20	18	МГИ ГРП МНР: Муренская Геологосъемочная Экспедиция Геологический План: Участка "Кварцевый"	Quartz	1:10,000	1982	in Russian
3-21	19	МГИ ГРП МНР: Муренская Геологосъемочная Экспедиция Схематический Геологический План и План Опробования Горных Выработок Участка "Скарновый"	Skarn	1:500	unknown	in Russian
3-22	20	Геологическая Карта. Свинцоворудное месторождение Хурилтугол	Khurity gol	1:200,000	1942	in Russian
3-23	24	Салхитын Голын Алт-Сульфидын Илрэлийн Геологийн Тойм Зураг	Salkhiitin gol	1:250,000	unknown	in Russian
3-24	27	Монголо-Советская Геологическая Экспедиция "Дархан" Сайхаиская Карта	Zairan	1:10,000	1987	in Russian
3-25	29	Схематическая Геологическая Карта: Участка "Бургэд Кяр"	Burged khyar	1:10,000	1990	in Russian
3-26	30	unknown	Urmin tsagaan nuur	1:10,000	unknown	in Russian
3-27	32	Схематическая Геологическая Карта: Участка "Унбрах"	Undrakh	1:10,000	1990	in Russian
3-28	33	Схематический Карта: Кварцевой Жилы Врайоне	Tsookhor morit	1:500/1:1,000	unknown	in Russian
3-29	34	Схематическая Геологическая Карта: Участка "Джасаны Буц"	Zhassin buuts	1:10,000	1982	in Russian
3-30	35	Схематическая Геологическая Карта с Результатами Поисковых Работ: Участка Харуул	Khar uul	1:10,000	1990	in Russian
3-31	38	Схематическая Геологическая Карта: Участок Хучжирдин	Khujirin gol	1:25,000	1985	in Russian
3-32	39	Участок Цзоухын	Zhuukhiin gol	1:10,000	1985	in Russian
3-33	42	unknown	Tourmaline	1:10,000	unknown	in Russian
3-34	43	unknown	Uder	1:10,000	unknown	in Russian
3-35	43	Эрдэнэтский Рудный Район Участок Болотный: Схематическая Геологическая Карта с Результатами Поисковых Работ	Uder/bolotni	1:25,000	1981	in Russian
3-36	44	unknown	Shand	1:10,000	1981	in Russian
3-37	45	Месторождение Эрдэнтуин-Обо Участок Юут: Схематическая Геологическая	Ouyt	1:2,000	1985	in Russian

Table A-7 List of geological, geochemical, and geophysical maps around the Erdenet mine

Index No.	Original title of the map (in Russian)	Name of the area (in English)	Kind of the map	Scale	Published Year
4-1	Геологическая Карта: Участка Хучжирин-Центральный	Hujirjin Gol	Geology (central)	1:5,000	1990
4-2	Участок Хучжирин: Схематическая Геологическая Карта	Hujirjin Gol	Geology	1:10,000	1985
4-3	Участок Хучжирин: Схематическая Геологическая Карта	Hujirjin Gol	Geology	1:25,000	1985
4-4	Участок Хучжирин: Карта Аномалий Свинца, Цинка и Серебра	Hujirjin Gol	Geochemical anomaly (Pb, Zn, Ag)	1:25,000	1985
4-5	Участок Хучжирин: Карта Полей Величин Мультипликати вного Показателя Коэффициента Зональности	Hujirjin Gol	Geochemical association and coefficient zonation	1:25,000	1985
4-6	Участок Хучжирин: Карта Аномалий Меди и Молибдена	Hujirjin Gol	Geochemical anomaly (Cu, Mo)	1:25,000	1985
4-7	Участок Хучжирин: Карта Аномалий Свинца, Цинка и Серебра	Hujirjin Gol	Geochemical anomaly (Cu, Mo)	1:10,000	1985
4-8	Участок Хучжирин: Карта Полей Величин Мультипликати вного Показателя Коэффициента Зональности	Hujirjin Gol	Geochemical anomaly (Pb, Zn, Ag)	1:10,000	1985
4-9	Участок Хучжирин: Геологические (unknown) Профилям II-I-I	Hujirjin Gol	Geochemical association and coefficient zonation	1:10,000	1985
4-10	Участок Шанд: Схематическая Геологическая Карта	Shand	Geological section (I-I line, II - II line)	1:2,000	1985
4-11	Участок Шанд: Карта фактической Материала	Shand	Geology	1:25,000	1985
4-12	Участок Шанд: Результаты Геофизических Работ Методом ВП-СГ, Магниторазведки	Shand	Actual material	1:25,000	1985
4-13	Участок Шанд: Результаты Электроразведочных Работ Методом ВЭЗ-ВП	Shand	IP (B П-С Г method) & magnetics	1:10,000	1985
4-14	Участок Шанд: Схематическая Геологическая Карта	Shand	IP (B 3-3-В П method), η K isoline & ρ K isoline	1:10,000	1985
4-15	Участок Шанд: Результаты Геофизических Работ Методом Разреза по Линиям I-I, II-III, IV-IV	Shand	Geology & Geological section (I-I line, II - II line, III - III line, IV-IV line)	1:5,000/1:2,000	1985
4-16	Участок Цзалу: Схематическая Геологическая Карта	Zaluu	Geology	1:25,000	1985
4-17	Участок Цзалу: Карта Полей Величин Мультипликати вного Показателя Коэффициента Зональности	Zaluu	Geochemical association and coefficient zonation	1:25,000	1985
4-18	Участок Цзалу: Результаты Геофизических Работ Методом Домбазэрин: I. Карта Фактического Материала II.	Zaluu	IP (B П-С Г method) & magnetics	1:25,000	1985
4-19	Участок Халиун: Схематическая Геологическая Карта	Dambasteren	Geology	1:25,000	1985
4-20	Участок Халиун: Схематическая Геологическая Карта и Фактического Материала	Haliun	Geology	1:25,000	1985
4-21	Участок Халиун: Результаты Геофизических Работ Методом ВП-СГ, Магниторазведки	Haliun	IP (B П-С Г method) & magnetics	1:25,000	1985
4-22	Участок Ингэтуин: I. Карта Литохимического Опробования II. Карта Аномалий Меди и Молибдена	Inget	Litho-geochemical sampling and anomaly (Cu, Mo)	1:25,000	1985
4-23	Участок Ингэтуин: I. Карта Аномалий Свинца, Цинка и Серебра II. Карта Полей Величин Мультипликати много Показателя Коэффициента Зональности	Inget	Geochemical anomaly (Pb, Zn, Ag) & geochemical association and coefficient zonation	1:25,000	1985
4-24	Участок Ингэтуин: Результаты Геофизических Работ Методом ВП-СГ, Магниторазведки	Inget	IP (B П-С Г method) & magnetics	1:25,000	1985
4-25	Участок Турмалиновый: I. Карта Фактического Материала II. Схематическая Геологическая Карта	Tourmaline	Geology	1:25,000	1985
4-26	Участок Турмалиновый: Схематическая Геологическая Карта Аномалий ВП-СГ, Магниторазведки	Tourmaline	Geology, η K-В anomaly & section by drillings	1:25,000	1985
4-27	Участок Турмалиновый: Результаты Геофизических Работ Методом ВП-СГ, Магниторазведки	Tourmaline	IP (B П-С Г method) & magnetics	1:25,000	1985
4-28	Участок Могой: Схематическое Строение, План Изолиний Кажущейся Полярзуемости (η K), План Изолиний Кажущейся Удельного Сопротивления (ρ K), План Графика (Лки)	Mogoin	Geological structure & IP (η K, ρ K)	1:10,000	1985
4-29	Участок Турмалиновый Могой: Результаты Электроразведочных Работ Методом ВЭЗ-ВП	Tourmaline & Mogoi	IP (B 3-3-В П method)	1:10,000	1985
4-30	Участок Могой: Карта Аномалий: I. Cu, Mo; II. Pb, Zn, Ag; III. Карта Полей Величин Мультипликати много Показателя Коэффициента Зональности	Mogoin	Geochemical anomaly (I. Cu, Mo; II. Pb, Zn, Ag) & geochemical association and coefficient zonation	unknown	1985

* Descriptions of all the maps are written in Russian.

Table A-7 List of geological, geochemical, and geophysical maps around the Erdenet mine

(2/2)

Index No	Original title of the map (in Russian)	Name of the area (in English)	Kind of the map	Scale	Published Year
4-31	Участок Цзоухыйн: Геологические Разрезы По Профилям 12	Zohiin	Geological section (Section 12; 9, 5)	1:2,000	1985
4-32	Участок Цзоухыйн. I. Карта Аномалий Меди и Молибдена. II. Карта Аномалий Свинца. Цинка и Серебра. III. Карта Полей Величин Мультипликативного Показателя Коэффициента Зональности	Zohiin	Geochemical anomaly (I. Cu, Mo; II. Pb, Zn, Ag) & geochemical association and coefficient zonation	1:25,000	1985
4-33	Участок Цзоухыйн: Результаты Электроразведочных Работ. I. Методом ВЭЗ-ВП	Zohiin	IP (B ЭЗ-В П method)	1:10,000	1985
4-34	Участок Цаган-Чулуту: Результаты Геофизических Работ Методом ВП-СГ. Магниторазведки	Tsugaan Chuluut	IP (B П-С Г method) & magnetics	1:25,000	1985
4-35	Участок Цаган-Чулуту. Карта Полей Величин Мультипликативного Показателя и Коэффициента Зональности	Tsugaan Chuluut	Geochemical association and coefficient zonation	1:25,000	1985
4-36	Северной Части Эрдэнтуинского Рудного Района В МНР: Геохимическая Карта	North of Erdenet Ovoo NW deposit	Geology	1:50,000	1973
4-37	Северной Части Эрдэнтуинского Рудного Района В МНР: Карта Результатов Литотохимического Опробования	North of Erdenet Ovoo NW deposit	Litho-geochemical sampling	1:50,000	1973
4-38	Карта Фактического Материала По Поисковым Маршрутам	North of Erdenet Ovoo NW deposit	Actual data for geological prospecting	1:50,000	1973
4-39	Участок Цаган-Чулуту: Карта Фактического Материала. Схематическая Геологическая Карта	Tsugaan Chuluut	Actual data & geology	1:25,000	1985
4-40	Рудной Зоны Эрдэнтуин-обо В МНР: Геологическая Карта	Erdenet Ovoo NW deposit	Geology	1:25,000	1973
4-41	Рудной Зоны Эрдэнтуин-обо В МНР: Карта Изодинам Магнитного Поля (ΔZa)	Erdenet Ovoo NW deposit	Magnetics	1:25,000	1973
4-42	Северо-Западного Участка Месторождения Эрдэнэтийн-Овоо: Геологическая Карта	Erdenet Ovoo NW deposit	Geology (6 sets)	1:2,000	1988
4-43	Схематическая Геологическая Карта Района Работ	Erdenet Ovoo NW deposit	Geology	1:50,000	1988
4-44	Карта Изолиний ΔZ Эрдэнэтийн-Овоо Рудной Зоны	Erdenet Ovoo NW deposit	Magnetics (3 sets)	1:10,000	1988
4-45	Карта Изолиний Кажущейся Поляризуемости Эрдэнэтийн-Овоо Рудной Зоны	Erdenet Ovoo NW deposit	IP (3sets)	1:10,000	1988
4-46	Карта Изом Казушег ося Сопротивления Эрдэнэтийн-Овоо Рудной Зоны	Erdenet Ovoo NW deposit	Resistivity (2sets)	1:10,000	1988
4-47	Карта Результатов Литохимического Опробования: Моноэлементные Аномалии Меди И Молибдена	Erdenet Ovoo NW deposit	Geochemical anomaly (Cu, Mo) (6 sets)	1:50,000	1985
4-48	Карта Результатов Литохимического Опробования: Моноэлементные Аномалии Свинца, Цинка, Серебра	Erdenet Ovoo NW deposit	Geochemical anomaly (Pb, Zn, Ag) (6 sets)	1:50,000	1985
4-49	Карта Результатов Литохимического Опробования: Мультипликативные Аномалии. Коэффициент Зональности	Erdenet Ovoo NW deposit	Geochemical association and coefficient zonation (6 sets)	1:50,000	1985

* Descriptions of all the maps are written in Russian.

Table A-8 List of geophysical surveys of the survey area

	1	2	3
1	Number	4788	4622
2	Report number	5031	4622
3	Area	M-48-67AB,-66AB,-65B,-56C,-55CD,-54CD;	M-48-104-B,C,D.
4	Coordinate		
5	Year of the survey	1994-1996	1990-1992
6	Method	Vertical electrical sounding (80 point s).	Magnetic survey, Induced polarization, Vertical electrical sounding.
7	specification	Geological mapping (at scale 1:50,000).	Geological mapping (at scale 1:50 000).
8	Objective	Determine the depth of the Quaternary sediments.	Select prospective fields.
9	Results	Made the 10 geological section of the Quaternary sediments.	Selected following fields Tsont togoi, Tsagaan chuluut, Tumor togoi, Saihan, Tsats togoi.
10	Follow-up drillings	Non	Rotary percussion drilling.
11	Total length of drill hole		1466.2m.
1	Number	5	6
2	Report number	4597	4633
3	Area	M-48-125-D,-137,138, L-48-5-A,B.	M-47-82ACD;M-47-81CD;M-47-92BD;M-47-93;M-47-94;M-47-95AC;
4	Coordinate		
5	Year of the survey	1987-1991	1986-1991
6	Method	Vertical electrical sounding, route-magnetic and induced polarization, gamma-spectrometer, logging (magnetic, induced polarization, gamma).	Vertical electrical sounding, route-magnetic and induced polarization, gamma-spectrometer, logging (magnetic, induced polarization, gamma).
7	specification	Geological mapping (at scale 1:50,000).	Geological mapping (at scale 1:50,000).
8	Objective	Determine the deep of the Quaternary sediments.	Determine the depth of the Quaternary sediments.
9	Results	Made the geological section of the Quaternary sediments.	Made the geological section of the Quaternary sediments.
10	Follow-up drillings	Core drilling.	Core drilling.
11	Total length of drill hole	2,563m.	2,563m.
1	Number	8	9
2	Report number	4428	3283
3	Area	M-47-77-B,D, M-47-78-A,B, M-47-98-B, M-47-90-A.	(103,00'-105,30')-(48,00'-49,40')
4	Coordinate		1964-1966
5	Year of the survey	1987-1989	
6	Method	Magnetic, Vertical electrical sounding, Induced polarization survey (at scale 1:10,000).	Vertical electrical sounding, Self-potential, Electric-magnetic, Radiometric, Logging.
7	specification	Geological mapping (at scale 1:50,000).	Geological mapping (at scale 1:50 000).
8	Objective	Select prospective fields.	Select prospective fields.
9	Results	Selected following fields: Jinst, Tsagaan uul.	Selected Erdenet(1.north-west, 2.central, 3.south-east), Tsagaan chuluut, Aguin davaa fields.
10	Follow-up drillings	Jinst(98.17°10'-98.22°30'x(49.33'20"-49.36'45''); Tsagaan uul(98.40'40"-98.44'30'')x(49.52'15"-54'20'');	
11	Follow-up drillings	Core drilling.	Drilling.
12	Total length of drill hole	Total 2,987m Tsagaan uul (11-16 holes, deep 90-210m), Jinst (1-10 holes, deep 45-150m).	2069.6m

Table A-8 List of geophysical surveys of the survey area

1	Number	10	11	12
2	Report number	2924	4552	605
3	Area	M-48-109-C		
4	Coordinate		(101.30'00"-106.00'00")X(49.15'00"-50.30'00")	(94.00'00"-98.00'00")X(48.30'00"-frontier)
5	Year of the survey	1977-1978	1986-1990	1952
6	Method	Magnetic, Vertical electrical sounding, electrical profiling, radiometer, natural electric field.	Magnetic (at scale 1:10,000-1:5,000), Electric profiling (at scale 1:5,000), Vertical electrical sounding, Gamma spectrometer by the foot.	Aeroradiometer-Aeromagnetic survey at scale 1:50,000.
7	specification	Geological mapping (at scale 1:50,000).	Geological mapping (scale at 1:200,000).	Aerogeophysical survey at scale 1:50,000.
8	Objective	Select prospective fields.	Select prospective fields.	Select prospective fields.
9	Results	Selected following fields: Sarain hundii, Zan Orsoo uul, Hustain ovoo, Mогоin гол, Oshig uul, Huljin гол.	Selected following fields: 1. Ereen, 2. Duut гол, 3. Tsagaan шар, 4. Uvur байсгалан.	Selected following fields: 1. Bayan uul, 2. Ust nuur, 3. Oigon nuur, and not name's fields in the M-47-75-85, 86, 88.
10	Follow-up drillings	Drilling.	Drilling	No
11	Total length of drill hole	525m	7.121m.	
1	Number	13	14	15
2	Report number	2429	2432	2433
3	Area			
4	Coordinate	(45.20'00"-50.00'00")X(103.30'00"-109.00'00")	(102.00'-106.00')X(46.20'-50.20')	(92.00'-102.00')X(47.30'-fortier)
5	Year of the survey	1982	1983	1984
6	Method	Aerogeophysical survey (magnetic, gamma-ray spectrometer) at scale 1:200,000; auto gamma spectrometer, foot gamma spectrometer, electric profiling, magnetic survey (at scale 1:10,000), gamma logging.	Aero gamma-spectrometer at scale 1:200,000, Autogamma and foot gamma-spectrometer, electric profiling (at scale 1:10,000), gamma logging.	Aero gamma-spectrometer at scale 1:200,000, Autogamma and foot gamma-spectrometer, electric profiling (at scale 1:10,000).
7	specification	Aerogeophysical survey at scale 1:200,000.	Aerogeophysical survey at scale 1:200,000 (for Uranium).	Aerogeophysical survey at scale 1:200,000 (for Uranium).
8	Objective	Select prospective fields.	Select prospective fields.	Select prospective fields.
9	Results	did not select prospective fields.	Selected 18 aeromagnetic anomalies and 25 aeroradiometric anomalies.	Selected 8 ray anomalies and Dagin гол, Bayar, Sul, Songin, Chuluut, Ushig гол, Balbar, Yаhis гол, Ar гол, Алаг-ердене, Ih uul fields.
10	Follow-up drillings	Drilling	No	Drilling (deep is to 50m).
11	Total length of drill hole	593m.		3,615m.
1	Number	16	17	
2	Report number	3199	3492	
3	Area			
4	Coordinate	Erdenet (103.30'-48.40';104.50'-48.40';103.30'-49.02';104.50'-49.10'); Murun (99.45'-49.38';100.07'-49.38';99.45'-49.55';100.18'-49.49';100.00'-50.02';100.18'-50.00').	1. Huvsgul (99.21'-49.30';99.45'-49.38';99.45'-49.55';100.18'-50.00';100.18'-50.00';100.18'-50.00'). 2. Bulgan (103.05'-48.32';103.30'-48.40';103.30'-49.02';103.05'-48.58').	49.49';100.07';49.38';100.30'-49.38';100.30'-50.32';100.00'-50.29';99.21'-50.16'). Erdenet (103.46'-49.02';104.16'-49.05';104.16'-49.28';103.46'-49.27').
5	Year of the survey	1980	1981-1982	
6	Method	Aeromagnetic gamma-spectrometer survey at scale 1:50,000 and magnetic gamma-spectrometer survey at scale 1:25,000-1:10,000.	Aeromagnetic gamma-spectrometer survey at scale 1:50,000.	
7	specification	Aerogeophysical survey at scale 1:50,000.	Aerogeophysical survey at scale 1:50,000.	
8	Objective	Select prospective fields.	Select prospective fields.	
9	Results	Selected following fields: 1. Ehnii, 2. Undur, 3. Murun, 4. 5 fields of the around Erdenet (Dugan, Shand, Zubiin гол).	Selected 34 anomalies in the Huvsgul area and 20 anomalies in the Bulgan-Erdenet area.	
11	Follow-up drillings	No	No	

Table A-8 List of geophysical surveys of the survey area

	18	19	20
1	Number	19	20
2	Report number	4240	4396
3	Area		M-48-109,110,111,121,122,123,134,135,1-48-3,4,5,6,7,15,16,17,18,19,29.
4	Coordinate	(103.10' -106.50' X(47.50' -48.40'))	(102.00' -103.15' X(48.00' -49.00')) and (103.15' -105.30' X(47.20' -48.00'))
5	Year of the survey	1986-1987	1988-1990
6	Method	Aeromagnetic electric gamma-spectrometer survey at scale 1:50,000, and Magnetic, gamma spectrometer, induced polarization at scale 1:25,000-1:5,000.	Aerogeophysical survey scale at 1:50,000 (follow-up geophysical survey at scale 1:10,000).
7	specification	Aerogeophysical survey at scale 1:50,000.	Aerogeophysical survey at scale 1:50,000.
8	Objective	Select prospective fields.	Select prospective fields.
9	Results	Selected following fields: 1.Avgal, 2.Baraan hudag, 3.Burgaltai, 4.Oyut ovoo, 5.Tsachir bulag, 6.Ulzit ovoo, 7.Tsengeg us, 8.Tsagaan hooloi, 9.Bulagt gol.	Selected following fields: 1. Lamzah tolgoi, 2. Shubuut, 3. Huh chuluut, 4. Hotol, 5. Barchgar, 6. Ar bulag, 7. Uushig, 8. Hoid oortsog, 9. Ugalz, 10. Uran hoshuu, 11. Shar had, 12. Tsagaan gozgor, 13. Holboo ovoo, 14. lh hush, 15. Mogod.
10	Follow-up drillings	No	No
11	Total length of drill hole		
1	Number	22	23
2	Report number	3172	3940
3	Area	M-48--XX,XXI,XXVI,XXVIII.	M-46-47,1-47-48,49.
4	Coordinate	(48.00':99.00')-(50.00':99.00')-(50.00':102.00')-(50.35':102.00')-(48.00':102.00')-(47.00':102.00')-(50.10':104.00')-(47.00':104.00').	
5	Year of the survey	1979-1980.	1985-1990.
6	Method	Aeromagnetic and magnetic survey.	Aeromagnetic, aerogamma spectrometric survey at scale 1:500,000, 1:200,000 and 1:50,000.
7	specification	Aerogeophysical survey at scale 1:200,000.	Aerogeophysical survey at scale 1:500,000.
8	Objective	Select prospective fields.	Select prospective fields.
9	Results	Selected 28 fields.Following: Egin gol, Saihan, Het, Murun, Burentogtoh, Tamirin gol, lh bumbut, Ulziti, Arc hargan, Dejidiin, Ar bulag, Buigan, Erin gol, Jargalant, Tsagaan tolgoi, Bayan zurh, Tsaidam nuur, Hadagin gol, Burehhaan, Holigsaitiin, Ulaan dnuuji, Tsagaan burgas, Zalaat, Chuluut, Tsahir, Gurvan bulag, Burt, Har horiin.	Not reports but maps have been stored in GIC.
10	Follow-up drillings	No.	No information.
11	Total length of drill hole	41,020m.	

Table A-9 List of survey points in eastern part of the survey area

Occurrence No.	Reference No.	Name of occurrence	Survey district	Location		Mineralization Type/Factor/Form	Size	Geology	Country rock	Age of Mineralization	Alteration	Mineralization	Main/Sub commodity	Ore reserve	Grade, Geochemical anomaly (maximum)							Remarks					
				latitude	longitude										Au(g/t)	Ag(g/t)	Cu(%)	Mo(%)	Pb(%)	Zn(%)	Cr(%)						
1	---	Sudal N177	Zaamar	N48°06'11.0'	E104°20'10.0'	epithermal?//vein	L200m × W0.5m-0.9m	---	---	pyritization	---	Au	---	0.20	---	---	---	---	---	---	---	---	---	---	---	---	
2	679	Ulit ovoo	Zaamar	N48°15'50.7'	E104°09'57.3'	skarn//small skarn body	---	Cambrian metamorphic rock, Triassic granite	granite?	---	skarnization	sphalerite, chalcocopyrite	Zn/Cu,Fe,Au	Cu:45,000t	0.20	---	0.070	---	---	---	---	---	---	---	---	high magnetic anomaly	
3	5390	Khuskhuut gol	Bulgan SW	N48°14'15.4'	E103°10'01.4'	metasomatic/fracture control/	300m × 50m	tuff breccia	tuff breccia	---	---	chalcocopyrite, malachite, azurite	Cu	---	---	---	10.000	---	---	---	---	---	---	---	---	---	
4	317	Oyuut khonkhor	Bulgan SW	N48°10'24.4'	E102°56'10.8'	porphyry?(epithermal?)//alteration zone?	ancient open pit:35 × 25 × 3(depth)m, 150m(E-W) × 450m(N-S)	Mesozoic rhyolite, intermediate composition tuff with andesite lava	---	---	silicification and kaolinization (rarely intensive limonitized pyrite), leaching and oxidized zone (<55m depth)	oxidized zone(20m):malachite, azurite hypogene zone:pyrite,chalcocopyrite	Cu/(Au)	---	8.80	0.20	0.100 (chip)	0.020 (core)	---	---	---	---	---	---	---	---	
5	---	Ilrel No.9	Bulgan SW	N48°06'53.8'	E102°38'14.3'	hydrothermal/tectonic fault/vein	100m × 1-3m	Carboniferous sandstone	---	---	---	---	Au	---	30.00	---	---	---	---	---	---	---	---	---	---	---	
6	407	Tsagan gongor	Uubulan	N48°38'59.7'	E102°13'02.5'	metasomatic/fault control/	5m width, dyke:1-5m width	granite, granodiorite	---	---	calcitization	---	Cu/Pb, Ag	---	---	50.00	1.000	---	0.200	---	---	---	---	---	---	---	
7	2137, 342?	Sairin hundii	Uubulan	N48°40'35.7'	E102°08'07.8'	hydrothermal/contact zone/	---	Jurassic granite, alkanin granite	---	---	---	chalcocopyrite,malachite,azurite	Cu/Pb, Mo	---	---	---	0.002	0.002	0.003	---	---	---	---	---	---	---	
8	463	Mogoin gol	Uubulan	N48°44'58.0'	E102°03'58.0'	metasomatic?//dyke	70m × 50m (max)	diorite dyke(12m width)	---	---	---	---	Cu/Zn,Pb,Ag	---	---	100.00	0.010	---	0.060	0.400	---	---	---	---	---	---	
9	406	Holboo ovoo	Uubulan	N48°37'57.9'	E102°07'13.5'	metasomatic?//contact accretion zone	---	Permian-Devonian diorite	---	---	skarnization	---	Cu/Pb,Zn,Mo,As	---	---	0.50	0.050	0.005	0.200	---	---	---	---	---	---	---	
10	1585	Gua ulaan uul	Uubulan	N48°54'53.4'	E101°53'49.0'	metasomatic/NW-oriented tectonic weak zone	L4,500m × W200m	syenite porphyry(host), Permian acidic volcanic rocks	---	---	silicification, argillization	Cu dissemination	Cu/Mo,Pb,Au, Ag,Sn,W	---	---	0.100	0.250 (channel samples)	<0.05	---	---	---	---	---	---	---	---	
11	837, 1586?	Zost tolgoi	Khujiit	N48°43'38.2'	E101°25'54.1'	porphyry(metasomatic)/fault control	L2.5km × W1km	Permian granite and syenite porphyry, Permian tuff and volcanic rocks, Jurassic granite(small body)	Permian granite and syenite porphyry	---	silicification, kaolinization, epidotization, sericitization, limonitization	pyrite, chalcocopyrite,sphalerite, galena, malachite	Cu/Mo,Pb,Au, Ag,Sn,W	---	---	0.10	20 (py zone), 0.15 (core)	---	---	---	---	---	---	---	IP anomaly(No.9 1 × 0.6km)		
12	822, 1587?	Yargit	Khujiit	N48°47'39.1'	E101°18'54.5'	porphyry?//fault control/veinlets and stockwork	NW-oriented line(100m × 40m),L200m × W40m	Permian granite (porphyry)	leucocratic granite porphyry	---	silicification, sericitization, tourmalinization, epidotization, leached sulfides, quartz vein	malachite, azurite,bornite, corrite, molybdenite,	Cu/Mo	---	---	---	0.300	<0.012	---	---	---	---	---	---	---	---	
13	1494	Donkhor bulag	Murun South	N49°22'17.6'	E100°09'55.0'	metasomatic?//alteration zone	---	Permian acidic tuff, trachyrhyolite porphyry	acidic tuff, trachyrhyolite porphyry	---	silicification	magnetite, pyrite	Cu/Pb,Au,Zn	---	---	---	0.003	---	0.002	0.003	---	---	---	---	---	---	
14	1491	Altgana gol	Altgana gol	N49°50'58.5'	E100°24'12.9'	/fault control/stockwork	L850m × W550m	Permian dolomite, basalt, granite	leucocratic granite porphyry	Jurassic	silicification, stockwork	molybdenite	Mo/Ag	Mo:14,700t	---	1.50	---	0.035	---	---	---	---	---	---	---	---	
16	1449	Tsgaan bulgas	Altgana gol	N49°56'02.6'	E100°20'59.9'	metasomatic/deep fault control/vein?	L1,200m × W500m	Paleozoic sedimentary rocks, serpentinite, carbonite	serpentinite, carbonite	Paleozoic	quartz vein?	fluorite	Ni/Cr,Cu,Pb,Zn	---	---	---	---	---	---	---	---	---	---	---	0.6	---	
18	1442	Quartz	Altgana gol NW	N50°14'09.7'	E100°16'53.7'	hydrothermal/fracture control/vein	vein L50m × W1.5m	Riphean sandstone, shale	sandstone, shale	Riphean	quartz vein	gold, silver	Au	---	7.60	3.20	---	---	---	---	---	---	---	---	---	---	
19	181	Skarn	Altgana gol NW	N50°09'20.3'	E100°00'58.9'	metasomatic?//skarn	L34.2m × W8m	Cambrian limestone, granodiorite	Devonian granodiorite	---	skarnization	---	Cu/(Zn)	---	---	10.00	1.000	---	0.700	0.300	---	---	---	---	---		
20	1567	Hurilt gol	Khokhoo	N50°38'18.5'	E100°46'37.7'	hydrothermal? Metasomatic/fault control/vein?	L80m × W0.35m	crystallin shale, Paleozoic diorite	crystallin shale, Paleozoic diorite	---	quartz & carbonate vein	galena,chalcocopyrite,chalcocite, pyrite	Pb/Cu	---	---	---	0.720	---	5.040	0.970	---	---	---	---	---	---	
20a	---	---	Khokhoo	N50°26'13.9'	E100°52'50.3'	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
20b	---	---	Khokhoo	N50°31'6.3'	E101°05'23.2'	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
20c	---	---	Khokhoo	N50°34'25.4'	E101°06'18.6'	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
20d	---	---	Khokhoo	N50°39'17.1'	E100°45'37.1'	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
25a	---	---	South Camp	N50°06'23.3'	E101°36'06.8'	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
25b	---	---	South Camp	N50°12'45.5'	E101°31'29.3'	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
25c	---	---	South Camp	N50°12'17.2'	E101°37'16.3'	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
25d	---	---	South Camp	N50°14'13.8'	E101°36'46.4'	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
25e	---	---	South Camp	N50°16'33.2'	E101°44'13.6'	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
25f	---	---	South Camp	N50°13'31.6'	E101°39'22.3'	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
26	419	Ereen ikher	Bulgan West	N48°49'10.5'	E102°34'49.0'	//alteration zone	200m	Devonian acidic volcanic rocks	acidic volcanic rocks	---	---	molybdenite	Ag? Cu?	---	---	0.50	0.007	---	---	---	---	---	---	---	---	---	
27	423	Zailan	Bulgan West	N48°49'17.5'	E102°42'08.7'	//vein	---	Permian-Jurassic conglomerate, andesite porphyry, subvolcanic rocks, granite, diorite	subvolcanic rocks, granite, diorite	---	---	chalcocopyrite,turquoise, lazurite, malachite, bornite	Cu	---	---	---	3.000	---	---	---	---	---	---	---	---	---	---
28	416	Nomgon	Bulgan West	N48°48'59.0'	E102°46'59.7'	//alteration zone	---	Permian-Jurassic syenite-diorite	syenite-diorite	---	---	---	Cu	---	---	---	0.001	---	---	---	---	---	---	---	---	---	

96~54

Table A-9 List of survey points in eastern part of the survey area

(1b/3)

Occurrence No.	Name of occurrence	Survey district	Topography/Vegetation	Type/Factor/Form	Geology	Country rock	Intrusive rock	Alteration	Mineralization	SAR data analysis	Rock samples	Geochemical analysis (maximum)							X-ray diffraction	K-Ar dating of volcanic and plutonic rocks
												Au(ppm)	Ag(ppm)	Cu(ppm)	Mo(ppm)	Pb(ppm)	Zn(ppm)	Cr(ppm)		
1	Sudal N177	Zaamar	mountain/thin	epithermal?//vein	Cambrian-Ordovician sandstone, shale, granitic rocks	granite, shale	granite	silicification, quartz & calcite vein, pyritization, greisenization	geochemical anomaly (Au)		NK001-006	2.650	20.4	344.0	12.0	344	18	44	---	
2	Ulzit oboo	Zaamar	hill/grass	skarn//small skarn body	Cambrian-Ordovician meta-sedimentary rocks, Permian granite, andesite	meta-sedimentary rocks	Permian granite	skarnization (drill core), dissemination of magnetite & pyrrhotite	geochemical anomaly (Zn)	lineament of ENE-WSW & NNW-SSE trend	NK007-008	0.003	0.2	498.0	0.5	26	1305	197	---	
3	Khushkhuut gol	Bulgan SW	hill/grass	//veinlets	Carboniferous andesitic tuff breccia	andesitic tuff breccia	---	epidotization, quartz veinlets	---	---	---	---	---	---	---	---	---	---	---	
4	Oyuut khonkhor	Bulgan SW	hill/grass	porphyry(epithermal)//alteration zone	Triassic-Jurassic andesite	andesite	---	silicification, hydrothermal breccia, argillization (sericite, kaolin)	weak geochemical anomaly (Au)	---	NK009-13	0.015	1.6	459.0	6.0	166	416	25	Qtz, Kaoline	
5	Ilrei No.9	Bulgan SW	hill/grass	hydrothermal/fracture/vein	Triassic sandstone, Triassic-Jurassic granite	sandstone	Triassic-Jurassic granite	limonitization, quartz vein	---	---	---	---	---	---	---	---	---	---	---	
6	Tsagaan gongor	Uubulan	hill/grass	hydrothermal?//	Permian-Triassic granite, granite porphyry, diorite porphyry, pegmatite	pegmatite	Permian-Triassic granitic rocks	epidotization	---	lineament of E-W trend	---	---	---	---	---	---	---	---	---	
7	Sairin hundii	Uubulan	hill/grass	hydrothermal/contact zone/	Permian basic rocks, Permian-Triassic granite, Jurassic trachyte porphyry, andesite porphyry, dacite porphyry	trachyte, andesite, dacite porphyry	---	silicification, limonitization	---	lineament of NNE-SSW trend	MZ001	0.003	Trace	4.0	0.5	26	58	3	---	
8	Mogoin gol	Uubulan	hill/grass	//	Permian-Triassic granite, granodiorite, tonalite, granite, andesite	granite, andesite	granite, andesite	quartz vein	oxidized Cu, weak Au geochemical anomaly	---	NK015-038	0.085	16.2	952.0	6.0	1475	1055	20	Qtz, Kaoline, Andalusite	
9	Holboo oboo	Uubulan	hill/grass	skarn/contact accretion zone/	Permian andesite, desite, sedimentary rocks, Permian granite	andesite, desite, sedimentary rocks	Permian granite	skarnization	---	---	NK014	0.003	0.1	7.0	0.5	48	168	10	---	
10	Gua ulaan uul	Uubulan	mountain/thin-grass	metasomatic/NW-oriented tectonic weak zone	Triassic dacitic andesite, dacite, pyroclastic rocks, syenogranite	dacitic andesite, dacite, pyroclastic rocks	syenogranite	silicification, argillization	weak geochemical anomaly (Au)	lineament of WNW-ESE trend	NK016, MZ002-003, RK001	0.010	2.2	13.0	109.0	64	252	13	Qtz, K-fel, Albite, Sericite	
11	Zost tolgoi	Khujirt	hill/grass	hydrothermal//	granodiorite, granite, andesite	granodiorite, granite, andesite	---	silicification, argillization (sericite), dissemination of pyrite	weak geochemical anomaly (Pb)	---	HK017-019, MZ004-005, RK002	0.003	1.6	34.0	1.0	6	28	30	Qtz, Albite, Sericite	
12	Yargit	Khujirt	hill/grass	hydrothermal/fracture control/veinlets and stockwork	granodiorite, dacite	granodiorite, dacite	---	quartz veinlets	malachite, azurite (along crack)	---	NK020	0.003	6.2	4360.0	50.0	14	40	3	---	
13	Donkhor bulag	Murun South	mountain/thin-grass	hydrothermal/fault control/	conglomerate, sandstone, shale, dacite, dacitic tuff	conglomerate, sandstone, shale, dacite, dacitic tuff	---	silicification, argillization (sericite), dissemination of pyrite, quartz vein	---	lineament of E-W trend	NK021-023, MZ006-007, RK003-004	0.003	1.0	20.0	20.0	702	148	12	Qtz, K-fel, Albite	
14	Altgana gol	Altgana gol	mountain/grass-forest	hydrothermal/fault control/stockwork	Permian granite, aplite	granite	aplite	quartz vein	molybdenite	---	NK024-025, HH003, MZ008, RK005	0.003	0.1	26.0	431.0	16	4	18	---	
16	Tsagaan bulgas	Altgana gol	mountain/grass-forest	//	Riphean-Cambrian basalt, serpentinite, carbonate rock	basalt, serpentinite, carbonate rock	---	chloritization, calcite vein	Cr geochemical anomaly	---	---	---	---	---	---	---	---	---	---	
18	Quartz	Altgana gol NW	mountain/forest	hydrothermal/fracture control/vein-veinlet	limestone, shale, green tuff, conglomerate	limestone, shale, green tuff, conglomerate	micro diorite	silicification, limonitization, quartz vein-veinlets	molybdenite	---	RK007-016	0.003	0.2	6.0	1.0	70	40	7	---	
19	Skarn	Altgana gol NW	hill/grass	//	Vendian crystallin limestone, marble	crystallin limestone, marble	---	---	---	---	---	---	---	---	---	---	---	---	---	
20	Hurilt gol	Khokhoo	mountain/forest	hydrothermal? Metasomatic/fault control/vein?	granite	granite	---	quartz vein (float rock)	---	lineament of NW-SE trend	MZ010	0.003	0.1	0.5	0.5	28	14	9	---	
20a	--	Khokhoo	hill/grass-forest	hydrothermal//vein	Devonian granodiorite	granodiorite	---	quartz vein (L:200m×W:40cm), hematite, limonitization	galena, malachite	lineament of NE-SW trend	MZ012	0.010	23.2	1135.0	0.5	5210	272	7	---	
20b	--	Khokhoo	mountain/grass-forest	hydrothermal/fracture control?/vein	meta-sedimentary rocks (silimanite shist), granite, aplite	meta-sedimentary rocks	granite, aplite	quartz vein (L:>150m)	---	conjunction of lineaments (NW-SE and E-W trend)	MZ013, RK008-010	0.003	0.2	8.0	0.5	86	32	17	---	
20c	--	Khokhoo	mountain/forest	//	gneiss, granodiorite, granite, pegmatite, andesite	gneiss, granodiorite, granite	pegmatite	greisen (sericite)	---	circular embossable feature	RK011	0.003	0.1	0.5	0.5	14	46	33	---	
20d	--	Khokhoo	mountain/forest	hydrothermal?//vein	granodiorite, andesite dyke	granodiorite	andesite	greisen (sericite), quartz vein	malachite, Pb and Ag geochemical anomaly	---	NK027, MZ011	0.605	44.2	7950.0	2.0	111000	130	90	---	
25a	--	South Camp	mountain/forest	hydrothermal//veinlets	granite, limestone	granite	---	quartz veinlets	weak geochemical anomaly (Au)	lineament of NEE-SWW trend	NK028, RK017	0.035	1.0	0.5	0.5	28	4	7	---	
25b	--	South Camp	hill/grass	hydrothermal/fault control/vein	Cambrian sedimentary rock (phyllite, tuff), granite	phyllite, tuff	granite	quartz veinlet	---	---	NK029	---	---	---	---	---	---	---	Qtz, Albite, Sericite	
25c	--	South Camp	hill/grass	//	Riphean-Cambrian ultra mafic rocks	ultra mafic rocks	---	---	---	---	MZ014	0.003	0.1	4.0	0.5	26	30	1675	---	
25d	--	South Camp	hill/grass	hydrothermal?//	Vendian-Cambrian pelitic and psammitic shist, ultra mafic rock	pelitic and samitic shist	---	weak listvenitization	---	---	NK030-031	0.003	0.2	6.0	0.5	Trace	18	1420	---	
25e	--	South Camp	mountain/forest	hydrothermal//vein	Cambrian psammitic shist	psammitic shist	---	quartz vein, calcite vein	---	---	RK018-019	0.003	0.1	14.0	0.5	4	4	11	---	
25f	--	South Camp	hill/grass	//	Cretaceous lake deposits, Alluvial gravel	Alluvial gravel	---	---	---	---	HH501P	0.011	5.0	39.0	2.5	8	59	490	---	
26	Ereen ikher	Bulgan West	hill/grass	hydrothermal//alteration zone	syenite, trachytic tuff	syenite, syenitic tuff	---	silicification, argillization	---	---	NK078-079, RK048-51	0.003	0.1	3.0	7.0	30	46	8	Qtz, Albite, K-fel	
27	Zaian	Bulgan West	hill/grass	porphyry//alteration zone	granite, Triassic andesite, porphyrite, Jurassic conglomerate	granite, andesite, porphyrite, conglomerate	---	quartz and tourmaline vein, K-fel alteration	malachite, azurite, turquoise	---	NK080, RK052-053	0.535	82.8	49100.0	341.0	36	24	5	---	

86~66

Table A-9 List of survey points in eastern part of the survey area

(2a/3)

Occurrence No.	Reference No.	Name of occurrence	Survey district	Location		Mineralization Type/Factor/Form	Size	Geology	Country rock	Age of Mineralization	Alteration	Mineralization	Main/Sub commodity	Ore reserve	Grade, Geochemical anomaly (maximum)							Remarks		
				latitude	longitude										Au(g/t)	Ag(g/t)	Cu(%)	Mo(%)	Pb(%)	Zn(%)	Cr(%)			
29	424	Burged khyr	Bulgan West	N48°52'04.2"	E102°49'41.4"	//stockwork	stockwork:20m×600m	Permian-Jurassic conglomerate, basalt, andesite porphyry, Permian-Triassic granite, diorite	granite, diorite	---	stockwork	---	Cu/Mo	Cu:163,000t, Mo:1,500t	---	---	0.360	0.020	---	---	---	---	---	---
30	5403	Urmiin tsagaan nuur	Bulgan West	N48°48'11.2"	E102°55'51.7"	//vein	vein:1m×0.4m	Lower Permian rhyolite-dacite, rhyolite porphyry	rhyolite-dacite, rhyolite porphyry	---	quartz vein	malachite, azurite	Cu	---	---	---	---	---	---	---	---	---	---	---
31	421	Aguit	Bulgan West	N48°47'00.0"	E102°57'00.0"	//alteration zone	1000m×15m	Devonian acidic volcanic rocks, Permian-Triassic granite	acidic volcanic rocks	---	---	chalcopryrite, malachite, lazurite	Cu/Au	---	0.10	---	0.005	---	---	---	---	---	---	---
32	420	Undrakh	Bulgan West	N48°42'03.8"	E102°45'44.4"	//vein	vein:300m×150m	subvolcanic rocks, Permian-Triassic diorite	diorite, subvolcanic rocks	---	quartz vein	---	Cu/Ag	---	---	10.00	0.700	0.700	---	---	---	---	---	---
33	416	Tsookher mert	Bulgan	N48°45'28.1"	E103°16'00.9"	//vein	vein:700m×2m	Permian-Triassic granite, syenite porphyry	granite, syenite porphyry	---	quartz vein	---	Au,Ag/Cu	Au:4.1t, Ag:18.4t	10.00	500.00	0.300	---	---	---	---	---	---	---
34	165	Jasiin buuts	Bulgan	N48°47'06.5"	E103°26'64.2"	//alteration zone	2km×0.5km	Permian acidic volcanic rocks	acidic volcanic rocks	---	---	---	Cu	---	---	---	0.007	---	---	---	---	---	---	---
35	417	Khar uul	Bulgan	N48°42'06.7"	E103°16'21.3"	//dyke	dyke:200-300m	Triassic-Jurassic volcanogenic sedimentary rocks	volcanogenic sedimentary rocks	---	---	chalcopryrite, bornite, gold	Cu/Au	---	3.00	---	0.500	---	---	---	---	---	---	---
36	(3137), (1936?)	Talbulag, Tsagaan chuluut	Erdenet	N49°05'05.4" N49°02'48.6"	E103°59'00.0" E103°59'58.5"								Cu?	---	---	---	---	---	---	---	---	---	---	---
37	89	Megein gol	Erdenet	N49°10'03.7"	E103°45'13.5"	//alteration zone	1.5km×1km	Permian volcanogenic sedimentary rocks	volcanogenic sedimentary rocks	---	---	---	Cu	---	---	---	0.070	---	---	---	---	---	---	---
38	5400	Khujiin gol	Erdenet	N49°07'52.1"	E103°38'52.4"	//vein	vein:6km×2km	Jurassic granodiorite, granosyenite	granodiorite, granosyenite	---	quartz vein	Chalcopryrite, malachite	Cu	---	---	---	0.740	---	---	---	---	---	---	---
39	82	Zuukhiim gol	Erdenet	N49°13'51.1"	E104°14'05.0"	//stockwork, dyke	stockwork, dyke:1.2km×3.5km	Permian-Triassic volcanogenic sedimentary rocks, Jurassic granite, granodiorite	granite, granodiorite	Permian-Triassic	stockwork	chalcopryrite, molybdenite, galena, sphalerite, pyrite	Cu/Mo	---	---	---	0.200	0.003	---	---	---	---	---	---
40	34	Erdenet NW	Erdenet	N49°01'18.1"	E104°07'44.1"	//stockwork	stockwork:2.8km×1.3km	Triassic-Jurassic intrusive rocks	intrusive rocks	---	stockwork	chalcopryrite, covellite, bornite, pyrite	Cu	Cu:2,825,000	---	---	0.900	---	---	---	---	---	---	---
41	24	Erdenet Central	Erdenet	N48°59'51.5"	E104°09'27.5"	//stockwork	stockwork:1.35km×0.3km	Permian-Triassic granodiorite, diorite	granodiorite, diorite	---	stockwork, oxidation zone	chalcopryrite, chalcocite, malachite, azurite, covellite	Cu/Mo	Cu:598,790, Mo:21,864	---	---	0.410	0.016	---	---	---	---	---	---
42	---	Tourmaline	Erdenet	N48°56'33.5"	E104°17'49.5"								Cu	---	---	---	---	---	---	---	---	---	---	---
43	---	Under	Erdenet	N48°49'57.2"	E104°13'19.6"								Cu	---	---	---	---	---	---	---	---	---	---	---
44	---	Shand	Erdenet	N48°45'39.5"	E104°11'45.8"								Cu/Mo	Cu:500,000t, Mo:5,000t	---	---	0.200 (core)	0.001 (core)	---	---	---	---	---	---
45	33	Oyut (SE)	Erdenet	N48°57'43.2"	E104°11'52.3"	//stockwork	stockwork:4km×0.6km	Triassic-Jurassic intrusive rocks	intrusive rocks	---	stockwork	chalcopryrite, molybdenite, covellite, chalcocite, pyrite	Cu	Cu:1,086,800, Mo:15,000t	---	---	0.400	---	---	---	---	---	---	---
46	(1677)	Zahu	Erdenet	N48°54'50.0"	E103°55'50.3"	//vein	quartz vein:1.5m×0.2m	Lower Permian andesite-basaltic tuff	andesite-basaltic tuff	---	quartz vein	---	---	---	---	---	1.000	0.01	---	---	---	---	---	---
47	---	Danbatseren	Erdenet	N48°50'06.0"	E103°48'13.4"								---	---	---	---	---	---	---	---	---	---	---	---
48	---	Mt. Zain gabaav	Bulgan	N48°53'39.8"	E103°37'44.6"								---	---	---	---	---	---	---	---	---	---	---	---
49	---	Eagle Mt. North	Zaamar West	N48°17'46.6"	E104°13'54.1"								---	---	---	---	---	---	---	---	---	---	---	---
SAR127	---	---	Erdenet	N49°20'07.1"	E104°09'57.3"		500m×400m						---	---	---	---	0.120	0.003	---	---	---	---	---	---
SAR136	---	---	Erdenet	N49°13'32.6"	E104°01'23.1"		4000m×500-1000m						---	---	---	---	0.200	0.020	---	0.010	---	---	---	---
SAR138	---	---	Erdenet	N49°13'01.4"	E104°29'00.9"		1500m×50-70m						---	---	---	---	0.600	---	---	---	---	---	---	---
SAR139	---	---	Erdenet	N49°13'07.7"	E104°36'40.1"		40m×0.5m						---	---	---	---	1.100	---	---	---	---	---	---	---
SAR144	---	---	Erdenet	N49°11'16.8"	E104°02'14.4"								---	---	---	---	1.179	---	---	---	---	---	---	---
SAR169	---	---	Erdenet	N48°59'45.0"	E104°23'20.0"								---	---	---	---	0.100	---	---	---	---	---	---	---
SAR181	---	---	Bulgan	N48°52'39.0"	E103°34'45.5"								---	---	---	---	0.200	---	---	---	---	---	---	---
SAR182	---	---	Bulgan	N48°52'47.1"	E103°38'34.4"								---	---	---	---	0.460	---	---	---	---	---	---	---
SAR183	---	---	Bulgan	N48°52'47.1"	E103°38'34.4"								---	---	---	---	0.460	---	---	---	---	---	---	---
SAR188	---	---	Erdenet	N48°53'02.3"	E104°22'54.7"		Depth:0.5m & 3-5m						---	---	---	---	0.060	0.002	---	---	---	---	---	---

Table A-9 List of survey points in eastern part of the survey area

(2b/3)

Occurrence No.	Name of occurrence	Survey district	Topography/Vegetation	Type/Factor/Form	Geology	Country rock	Intrusive rock	Alteration	Mineralization	SAR data analysis	Rock samples	Geochemical analysis (maximum)							X-ray diffraction	K-Ar dating of volcanic and plutonic rocks
												Au(ppm)	Ag(ppm)	Cu(ppm)	Mo(ppm)	Pb(ppm)	Zn(ppm)	Cr(ppm)		
28	Nomgon	Bulgan West	hill/grass	porphyry?//alteration zone	syenite, granodiorite	syenite, granodiorite	---	K-fel and magnetite alteration, epidotization, silicification, sericitization	---	---	MZ057-059	---	---	---	---	---	---	---	---	
29	Burged khyr	Bulgan West	hill/grass	hydrothermal?//alteration zone	Permian-Triassic granite, Jurassic conglomerate	granite, conglomerate	---	silicification, argillization, limonitization	---	---	MZ054-056	---	0.5	40.0	---	50	120	---	Qtz, Albite, K-fel, Sericite	
30	Urmin tsgaan nuur	Bulgan West	mountain/forest	hydrothermal?//alteration zone	Triassic trachytic tuff, syenite, aplite	Triassic trachytic tuff	syenite, aplite	silicification	---	---	MZ052-53, RK045-47	Trace	Trace	36.0	Trace	28	80	24	---	
31	Aguit	Bulgan West	hill/grass-forest	hydrothermal?//alteration zone	Devonian acidic volcanic rocks, Permian-Triassic granite	acidic volcanic rocks, granite	---	silicification	---	---	NK074-81, HH024-026	0.015	9.0	37.0	45.0	486	172	15	Qtz, Albite, K-fel	
32	Undrakh	Bulgan West	hill/grass	porphyry?//alteration zone	granite, aplite granite, Quaternary sediments	granite	---	potassic alteration, quartz vein, limonitization	chalcopryite, malachite	---	MZ060, RK054-057	0.215	33.8	18300.0	208.0	50	26	7	---	
33	Tsookher mert	Bulgan	mountain/grass	hydrothermal?//vein	granite	granite	---	quartz vein (width: 1-10cm), argillization (sericite)	malachite, azurite, galena, geochemica anomaly (Au)	---	MZ061-065	6.290	554.0	1940.0	16.0	119000	396	18	Qtz, Albite, K-fel, Sericite	
34	Jasiin buuts	Bulgan	mountain/forest	hydrothermal?//vein-alteration zone	andesite, dacite, granite, micro diorite	andesite, desite	granite, micro diorite	silicification, argillization (sericite), quartz vein, dissemination of pyrite	---	---	HH032-035, RK058-062	Trace	0.2	17.0	7.0	30	70	15	Qtz, Albite, Sericite	
35	Khar uul	Bulgan	hill/grass	hydrothermal?//vein	andesite, basalt, diorite dyke	andesite, basalt	diorite	quartz and chlorite vein	malachite	---	NK083, MZ066-067	0.010	6.6	13000.0	Trace	720	28	93	---	
36	Talbulag, Tsagaan chuluut	Erdenet	mountain/grass-forest	porphyry?//alteration zone	Mesozoic andesite, dacite	andesite, dacite	---	silicification, quartz veinlet, silica sinter	---	lineament of NNW-SSE trend	NK040-046, MZ022-023, MZ026-027	Trace	0.2	50.0	4.0	28	70	55	Qtz, Albite, K-fel, Andalusite	andesite:210±4Ma
37	Megein gol	Erdenet	mountain/grass-forest	porphyry?//alteration zone	granite, andesite, dacite	granite, andesite, dacite	---	silicification	---	lineament of NW-SE trend	MZ049	Trace	Trace	2.0	Trace	18	8	4	---	
38	Khujirin gol	Erdenet	mountain/grass-forest	porphyry?//alteration zone	granodiorite, syenite, andesite, dacite	granodiorite, syenite, andesite, dacite	---	potassic alteration, quartz vein	weak geochemical anomaly (Cu, Pb, Zn)	---	MZ018-021, RK021-023	Trace	Trace	113.0	Trace	106	460	49	---	
39	Zuukhiim gol	Erdenet	mountain/grass-forest	hydrothermal?//alteration zone	granodiorite, andesite-dasite lava, dacite porphyry	granodiorite, andesite-dasite, dacite porphyry	andesite, dacite porphyry	silicification, limonitization	malachite, weak geochemical anomaly (Au, Ag)	---	MZ028-029, RK028	0.010	14.8	8750.0	1.0	506	120	13	---	
40	Erdenet NW	Erdenet	hill/grass	porphyry//alteration zone	granite, granodiorite, diorite, andesite dyke	granite, granodiorite	diorite, granodiorite, andesite	silicification, argillization, potassic alteration, oxidization, limonitization, quartz+pyrite vein	chalcopryite, chalcocite, malachite, azurite (along crack)	conjunction of lineaments (NW-SE and N-S)	HH008-012, MZ015-017, MZ050-051, RK020-021	Trace	5.0	5670.0	110.0	0	600	10	Qtz, Albite, K-fel, Sericite, Chlorite, Pyrite	altered granite:202±4Ma, 223±6Ma
41	Erdenet Central	Erdenet	hill/grass	porphyry//alteration zone	granite, diorite	granite	diorite	silicification, argillization(sericite), tourmalinization, potassic alteration	malachite	conjunction of lineaments (NW-SE and N-S)	RK029-032	0.010	0.8	5510.0	21.0	12	94	9	---	
42	Tourmaline	Erdenet	hill/grass	porphyry//alteration zone	granodiorite, syenite, andesite dyke	granodiorite, syenite	andesite dyke	silicification, tourmalinization	---	---	NK059-061, MZ030-033	Trace	0.2	47.0	8.0	120	82	13	Qtz, Albite, K-fel, Sericite, Andalusite	
43	Under	Erdenet	mountain/grass-forest	porphyry//alteration zone	granitic rocks, quartz porphyry, andesite	granitic rocks, andesite	quartz porphyry	silicification, argillization(sericite), tourmalinization, limonitization	---	lineament of N-S trend	MZ036-040	Trace	Trace	50.0	Trace	16	54	18	---	
44	Shand	Erdenet	hill-mountain/grass-forest	porphyry//alteration zone	granite, granodiorite, micro diorite, andesite porphyry dyke	granite, granodiorite	micro diorite, andesite porphyry	potassic alteration	malachite, azurite	conjunction of lineaments (NW-SE and N-S)	RK039-040	0.050	2.2	9490.0	17.0	198	130	10	---	
45	Oyut (SE)	Erdenet	hill/grass	porphyry//alteration zone	granodiorite, granodiorite porphyry, andesite, syenite, diorite	granodiorite, granodiorite porphyry	andesite, syenite, diorite	argillization (sericite), limonitization, acid leaching zone	dissemination of chalcopryite (core)	---	MZ041-044	---	Trace	500.0	---	10	115	---	---	
46	Zалуу	Erdenet	hill/grass-forest	hydrothermal?//vein	granite, monzonite, Triassic-Jurassic andesite	granite	monzonite, andesite	quartz and epidote vein	---	---	NK066-67, HH020	---	Trace	55.0	---	25	125	---	Sericite	basalt: 195±4Ma
47	Danbatseren	Erdenet	hill/thin	hydrothermal?//alteration zone	granite, Jurassic dacite	granite, Jurassic dacite	---	silicification, quartz veinlets, tourmalinization, limonitization	---	lineament of NNE-SSW trend	NK068-073, HH021	Trace	1.2	27.0	3.0	22	42	79	Qtz, K-fel, Sericite, Pyrophyllite, Kaolin, Andalusite	
48	Mt. Zain gabaav	Bulgan	hill/grass	hydrothermal?//alteration zone	andesite	andesite	---	weak silicification, argillization, dissemination of pyrite (limonite), propylitic alteration	malachite	---	RK069-078	Trace	4.8	3100.0	Trace	100	54	118	Qtz, K-fel, Sericite, Pyrophyllite, Kaolin	
49	Eagle Mt. North	Zaamar West	mountain/grass	hydrothermal?//alteration zone	Paleozoic granite, Riphean limestone, tuff, basalt dyke	tuff	basalt	silicification, epidotization, calcite vein	---	---	MZ076	Trace	Trace	25.0	Trace	4	18	74	---	
SAR127	---	Erdenet	hill/forest	//	granodiorite	---	---	---	---	high density lineaments area	RK044	---	Trace	60.0	---	Trace	70	---	---	
SAR136	---	Erdenet	mountain/grass-forest	//	granite, aplite	---	aplite	---	---	conjunction of lineaments area and high density lineaments area	RK027	Trace	Trace	108.0	Trace	4	4	3	---	
SAR138	---	Erdenet	hill/thin-grass	porphyry?//alteration zone	granite	granite	---	weak alteration?	malachite	conjunction of lineaments area	NK047-050, HH013	Trace	1.2	1560.0	Trace	66	170	22	basalt: 282±6Ma	
SAR139	---	Erdenet	hill/thin-grass-forest	porphyry?//alteration zone	quartz diorite, granodiorite, basalt dyke	quartz diorite, granodiorite	basalt	quartz and epidote vein, hydrothermal breccia, limonitization, potassic alteration	chalcopryite, malachite	conjunction of lineaments area	NK051-058, HH014-018	0.110	13.2	20700.0	3.0	18	52	27	Qtz, Albite, Kaolin	basalt: 282.6±6Ma
SAR144	---	Erdenet	mountain/grass-forest	hydrothermal?//vein	granite, granodiorite	granite, granodiorite	---	quartz vein, silicification, epidotization	malachite	conjunction of lineaments area and high density lineaments area	RK024-026	0.005	2.0	20200.0	15.0	10	180	19	---	
SAR169	---	Erdenet	mountain/forest	//	granite (float rock), volcanic rock (float rock)	---	---	---	---	NW trend lineament area	---	---	---	---	---	---	---	---	---	
SAR181	---	Bulgan	hill/grass	hydrothermal?//alteration zone	andesite porphyry	andesite porphyry	---	weak silicification, epidotization, limonitization	malachite	conjunction of lineaments area	RK075	Trace	7.8	13300.0	0.5	14	28	141	---	
SAR182	---	Bulgan	mountain/forest	hydrothermal?//alteration zone	andesite, trachyandesite	andesite, trachyandesite	---	quartz and epidote vein	malachite	conjunction of lineaments and relatively smooth tone area	RK068	0.010	3.4	7430.0	Trace	24	8	21	---	

Table A-9 List of survey points in eastern part of the survey area

Occurrence No.	Name of occurrence	Survey district	Topography/Vegetation	Type/Factor/Form	Geology	Country rock	Intrusive rock	Alteration	Mineralization	SAR data analysis	Rock samples	Geochemical analysis (maximum)							X-ray diffraction	K-Ar dating of volcanic and plutonic rocks	
												Au(ppm)	Ag(ppm)	Cu(ppm)	Mo(ppm)	Pb(ppm)	Zn(ppm)	Cr(ppm)			
SAR183	---	Bulgan	hill/grass	hydrothermal//alteration zone	andesite porphyry	andesite porphyry	---	silicification, epidotization, quartz and epidote vein	malachite	conjunction of lineaments and relatively smooth tone area	RK066-067	Trace	8.4	19100.0	Trace	62	20	95	---		
SAR188	---	Erdenet	mountain/forest	hydrothermal?//alteration zone	granite, basalt, andesite	granite	basalt	epidotization	---	NW trend lineament area	NK062-064, MZ034-035	Trace	0.2	7.0	Trace	96	66	23	Qtz, Albite, K-fel, Sericite, Kaolin		
SAR194	---	Bulgan	hill/grass	hydrothermal//vein	andesite lava, tuff	andesite lava, tuff	---	quartz and epidote vein	malachite	conjunction of lineaments area	NK082, RK076	Trace	19.8	25700.0	Trace	44	46	128	---		
SAR197	---	Bulgan	hill/grass	hydrothermal//vein	Triassic andesite	andesite	---	quartz and epidote veinlet	---	conjunction of lineaments area	MZ068-069	Trace	Trace	110.0	Trace	42	64	81	---		
SAR200	---	Erdenet	mountain/grass	hydrothermal?//vein	granite, aplite	granite	aplite	quartz vein	---	NW trend lineament area	RK033	Trace	Trace	34.0	Trace	8	Trace	20	---		
SAR202	---	Bulgan	hill/grass	hydrothermal?//vein	Triassic andesite lava	andesite	---	epidotization, quartz veinlets	---	conjunction of lineaments area	MZ072	Trace	Trace	36.0	Trace	30	34	14	---		
SAR204	---	Bulgan	hill/grass	hydrothermal?//vein-alteration zone	Triassic andesite	andesite	---	epidotization, quartz and epidote veinlets	malachite	conjunction of lineaments and relatively smooth tone area	MZ073-074	Trace	0.005	4.8	20600.0	Trace	0.5	30	56	61	---
SAR205	---	Bulgan	mountain/grass-forest	hydrothermal?//vein-alteration zone	Triassic andesite	andesite	---	weak silicification and epidotization, quartz and epidote veinlets	---	conjunction of lineaments area	MZ070-071	Trace	Trace	12.0	Trace	108	52	52	---		
SAR219	---	Bulgan	mountain/grass-forest	hydrothermal//alteration zone	Mesozoic andesite	andesite	---	silicification, argillization (sericite)	---	relatively smooth tone area	RK065	Trace	Trace	6.0	Trace	2	26	8	Qtz, Albite, Sericite		
SAR221	---	Bulgan	mountain/grass-forest	hydrothermal//alteration zone	Mesozoic andesite	andesite	---	silicification, quartz and epidote vein	---	relatively smooth tone area	HH036, RK063	Trace	0.2	79.0	Trace	32	44	76	Qtz, Albite		
SAR222	---	Bulgan	mountain/grass-forest	hydrothermal//alteration zone	andesite porphyry	andesite porphyry	---	silicification, quartz veinlets	---	relatively smooth tone area	RK064	Trace	0.2	33.0	Trace	10	28	8	---		
SAR233	---	Erdenet	hill/grass	hydrothermal//alteration zone	Paleozoic granite, dacite	granite, dacite	---	hydrothermal breccia	---	irregular feature and relatively smooth tone area	MZ045-046, RK041	Trace	Trace	113.0	1.0	40	10	14	---		
SAR235	---	Erdenet	hill/grass	hydrothermal//alteration zone	Paleozoic granite-granodiorite, andesite	granite-granodiorite	andesite	argillization (sericite), dissemination of pyrite (limonite)	---	relatively smooth tone area	MZ047-048, RK042-043	Trace	Trace	37.0	Trace	26	14	5	---		
SAR238	---	Erdenet	hill/grass	hydrothermal//vein?	granite, granodiorite	granite, granodiorite	---	quartz and epidote vein	---	conjunction of lineaments area	RK034-038	Trace	Trace	16.0	Trace	12	34	12	---		
SAR239	---	Erdenet	hill/grass	//	granite, aplite	---	---	---	---	conjunction of lineaments area	NK065	---	---	---	---	---	---	---	---		
SAR25	Davaar	Erdenet	hill/grass	hydrothermal?//alteration zone	Triassic granite	Triassic granite	---	pyritization	---	conjunction of lineaments area and high density lineaments area	MZ024-025	Trace	Trace	42.0	1.0	34	102	113	---		
M-1	---	Zaamar West	hill/grass	hydrothermal//alteration zone	andesite lava	andesite lava	---	chloritization, quartz vein	---	circular embossable feature	HH038	---	---	---	---	---	---	---	---		
M-2	---	Zaamar West	hill/grass	//	andesite	---	---	---	---	circular embossable feature	MZ075	Trace	Trace	133.0	Trace	14	108	193	---		
M-3	---	Zaamar West	hill/grass	//	trachytic andesite, granite(float rock)	---	---	---	---	circular embossable feature	---	---	---	---	---	---	---	---	---		

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Table A-10 Description of rock and ore samples

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No	Sample No	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysis type
1	M99NK001M	48°06'13.6"	104°20'15.2"	1	Zaamar	Sudai N177	quartz vein		white, hosted in granite	---	limonite	G
2	M99NK002R	48°06'13.6"	104°20'15.2"	1	Zaamar	Sudai N177	granite		coarse grain	---	---	G, X
3	M99NK003M	48°06'13.6"	104°20'15.2"	1	Zaamar	Sudai N177	quartz vein		white, hosted in granite	---	---	G, 180, F
4	M99NK004M	48°06'28.4"	104°19'19.3"	1	Zaamar	Sudai N177	quartz vein		milky, hosted in granite	---	---	G
5	M99NK005M	48°04'58.3"	104°25'53.9"	1	Zaamar	Sudai N177	quartz vein		white, hosted in granite	---	---	G, 180, F
6	M99NK006R	48°04'58.3"	104°25'53.9"	1	Zaamar	Sudai N177	slate		---	pyrite dissemination	pyrite	G
7	M99NK007R	48°16'15.0"	104°09'54.3"	2	Zaamar	Ulziit ovoo	andesite		---	pyroxene skarn	---	G, T
8	M99NK008M	48°16'15.0"	104°09'54.3"	2	Zaamar	Ulziit ovoo	slate		black	skarnization	magnetite, Po, chalcopyrite	G, PT
9	M99NK009R	48°10'24.3"	102°56'10.8"	4	Bulgan SW	Oiut honhor	silicified rock		white	silicification	---	G, X
10	M99NK010R	48°10'24.4"	102°56'10.8"	4	Bulgan SW	Oiut honhor	silicified rock		white	silicification	limonite	G, X
11	M99NK011R	48°10'24.4"	102°56'10.8"	4	Bulgan SW	Oiut honhor	silicified rock		gray	silicification	fine pyrite	G, X
12	M99NK012R	48°10'24.4"	102°56'10.8"	4	Bulgan SW	Oiut honhor	silicified rock		---	silicification	Cu oxides	G
13	M99NK013M	48°10'41.3"	102°55'17.8"	4	Bulgan SW	Oiut honhor	hydrothermal breccia		---	silicification	fine pyrite	G
14	M99NK014R	48°37'59.9"	102°07'06.4"	9	Uubulan	Holboo ovoo	andesite		---	pyroxene skarn	---	G, T
15	M99NK015R	48°44'58.0"	102°03'58.0"	8	Uubulan	Mogoin gol	diorite		---	---	Cu, Mn oxides	G
16	M99NK016R	48°54'53.4"	101°53'49.0"	10	Uubulan	Gua ulaan uul	breccia		---	silicification	---	G, X
17	M99NK017R	48°43'37.5"	101°25'56.7"	11	Khujirt	Zost toigoi	granite		---	silicification	quartz, sericite, limonite	G, X

Table A-10 Description of rock and ore samples

No	Sample No.	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysys type
18	M99NK018R	48°43'08.3"	101°25'12.2"	11	Khujirt	Zost tolgoi	andesite		----	argillization	----	G
19	M99NK019R	48°43'03.6"	101°25'03.0"	11	Khujirt	Zost tolgoi	granite		drill core	silicification	----	G
20	M99NK020M	48°47'37.9"	101°18'53.2"	12	Khujirt	Yargit	granite		----	oxide copper	malachite, azurite	G
21	M99NK021M	48°22'25.5"	100°10'31.2"	13	Murun South	Donhor bulag	quartz vein		hosted in rhyolite	----	----	G
22	M99NK022M	48°22'26.2"	100°10'29.2"	13	Murun South	Donhor bulag	quartz vein		hosted in rhyolite	----	----	G
23	M99NK023R	48°22'18.0"	100°10'45.0"	13	Murun South	Donhor bulag	hydrothermal breccia		----	silicification	----	G
24	M99NK024M	49°50'58.5"	100°24'12.9"	14	Altgana gol	Altgana gol	quartz vein		----	----	molybdenite?	G
25	M99NK025R	49°51'00.0"	100°24'11.0"	14	Altgana gol	Altgana gol	apelite		fresh	----	----	T, M
26	M99NK026R	49°56'13.5"	100°20'55.4"	16	Altgana gol NW	Delger uul	harzbergite		----	serpentinized	----	T
27	M99NK027R	50°39'17.1"	100°45'37.1"	20d	Khokhoo	----	andesite		----	----	sulfide(not identified)	G, P
28	M99NK028R	50°06'24.3"	101°36'02.9"	25a	South Camp	----	apelite		fresh	----	----	T, M
29	M99NK029R	50°12'45.9"	101°31'26.6"	25b	South Camp	----	acidic tuff		white	----	----	T, X
30	M99NK030R	50°14'13.8"	101°36'45.6"	25d	South Camp	----	listwaenite		altered gabbro?	----	----	G, T
31	M99NK031R	50°14'13.8"	101°36'46.4"	25d	South Camp	----	listwaenite		altered gabbro?	----	----	G, T
32	M99NK032R	50°13'31.6"	101°39'22.3"	37	Erdenet	Mogoin gol	quartzite gravel		pebble size	----	----	G
33	M99NK033R	49°10'37.1"	103°44'24.7"	37	Erdenet	Mogoin gol	granodiorite		----	----	----	T, M
34	M99NK034R	49°10'03.7"	103°45'13.5"	37	Erdenet	Mogoin gol	granite		polus	quartz, sericite, limonite	----	G, X

Table A-10 Description of rock and ore samples

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No	Sample No	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysys type
35	M99NK035R	49°10'03.7"	103°45'13.5"	37	Erdenet	Mogoin gol	granite		equigranular quartz	quartz, limonite	----	G
36	M99NK036R	49°10'03.7"	103°45'13.5"	37	Erdenet	Mogoin gol	granite		----	quartz, limonite	----	G
37	M99NK037R	49°10'03.7"	103°45'13.5"	37	Erdenet	Mogoin gol	granite		----	quartz, limonite	----	G, F
38	M99NK038R	49°10'08.3"	103°44'43.0"	37	Erdenet	Mogoin gol	granite		fresh, coarse grained	----	----	T, M
39	M99NK040R	49°04'46.0"	103°58'41.0"	36	Erdenet	Talbulag	tuff breccia		andesite	----	----	T
40	M99NK041R	49°04'59.0"	103°59'14.9"	36	Erdenet	Talbulag	andesite		fresh	----	----	W, T
41	M99NK042R	49°05'17.2"	104°00'34.5"	36	Erdenet	Talbulag	andesite		porphyritic	----	----	T
42	M99NK043R	49°05'17.2"	104°00'34.5"	36	Erdenet	Talbulag	tuff breccia		andesite	silicification	----	G, T
43	M99NK044R	49°05'17.2"	104°00'34.5"	36	Erdenet	Talbulag	rhyolite		----	silicification	----	G
44	M99NK045R	49°05'17.2"	104°00'34.5"	36	Erdenet	Talbulag	silicified rock		original rock ?	silicification	----	G
45	M99NK046R	49°05'17.2"	104°00'34.5"	36	Erdenet	Talbulag	silicified rock		original rock ?	silicification	----	G
46	M99NK047R	49°13'01.4"	104°29'00.9"	SAR138	Erdenet	----	granite		coarse	----	----	T, M
47	M99NK048R	49°13'12.2"	104°28'22.1"	SAR138	Erdenet	----	granite		----	----	malachite	G, T
48	M99NK049R	49°13'12.2"	104°28'22.1"	SAR138	Erdenet	----	syenite		----	----	malachite	T
49	M99NK050R	49°13'12.2"	104°28'22.1"	SAR138	Erdenet	----	granite		fine grained	----	----	T, M
50	M99NK051R	49°12'56.8"	104°37'19.6"	SAR139	Erdenet	----	granite		fresh	----	----	W, T
51	M99NK052R	49°12'56.8"	104°37'19.6"	SAR139	Erdenet	----	basalt		dyke, fresh	----	----	W, T

Table A-10 Description of rock and ore samples

No.	Sample No	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysys type
52	M99NK053R	49°12'56.8"	104°37'19.6"	SAR139	Erdenet	----	quartz+epidote vein		hosted in granite	epidote	----	G
53	M99NK054R	49°12'56.8"	104°37'19.6"	SAR139	Erdenet	----	granite		----	epidote	----	T
54	M99NK055M	49°13'07.7"	104°36'40.1"	SAR139	Erdenet	----	basalt		----	epidote, silicification	chalcopyrite	PT
55	M99NK056M	49°13'07.7"	104°36'40.1"	SAR139	Erdenet	----	ore		----	epidote, silicification	malachite, chalcopyrite, pyrite	G
56	M99NK057M	49°13'07.7"	104°36'40.1"	SAR139	Erdenet	----	ore		----	epidote, silicification	malachite, chalcopyrite, pyrite, limonite	G, P
57	M99NK058R	49°13'07.7"	104°36'40.1"	SAR139	Erdenet	----	basalt		fresh	----	----	T
58	M99NK059R	48°56'33.0"	104°17'49.5"	42	Erdenet	Tourmarine	granite		fresh	----	----	W, T
59	M99NK060R	48°56'33.0"	104°17'49.5"	42	Erdenet	Tourmarine	quartz+tourmaline vein		----	----	----	G
60	M99NK061R	48°56'33.2"	104°17'32.4"	42	Erdenet	Tourmarine	granite		fresh	----	----	W, T
61	M99NK062R	48°56'33.0"	104°17'49.5"	SAR188	Erdenet	----	granite		altered	tourmaline, sericite, quartz, muscovite	----	X, M
62	M99NK063R	48°53'16.5"	104°22'36.4"	SAR188	Erdenet	----	granite		----	----	----	T, M
63	M99NK064R	48°53'16.5"	104°22'36.4"	SAR188	Erdenet	----	basalt		altered	epidote, quartz	----	G
64	M99NK065R	48°44'57.3"	104°12'29.9"	SAR239	Erdenet	----	aplite		fresh	----	----	T, M
65	M99NK066R	48°54'50.0"	103°56'08.0"	46	Erdenet	Zaluu	syenite		----	----	----	T, M
66	M99NK067R	48°54'39.4"	103°56'08.4"	46	Erdenet	Zaluu	basaltic andesite		fresh	----	----	W, T
67	M99NK068R	48°54'39.4"	103°56'08.4"	47	Erdenet	Dambatseren	quartz+epidote vein		hosted in granite	----	----	G
68	M99NK069R	48°54'38.4"	103°57'04.8"	47	Erdenet	Dambatseren	quartz porphyry		----	----	----	T, M

Table A-10 Description of rock and ore samples

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No.	Sample No	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysys type
69	M99NK070R	48°51'39.9"	103°47'16.5"	47	Erdenet	Dambatseren	dacite		lipalite by Mongolian	silicified	--	G, T
70	M99NK071R	48°51'39.9"	103°47'16.5"	47	Erdenet	Dambatseren	quartz vein		--	quartz, tourmaline, limonite	--	G
71	M99NK072R	48°51'39.9"	103°47'16.5"	47	Erdenet	Dambatseren	dacite		--	quartz, sericite	--	X
72	M99NK073R	48°51'39.9"	103°47'16.5"	47	Erdenet	Dambatseren	quartz porphyry?		--	--	ore mineral?	P
73	M99NK074R	49°10'08.2"	103°44'41.3"	31	Bulgan West	Agut	andesite		lipalite by Mongolian	silicified	--	T
74	M99NK075R	48°47'49"	102°57'06.7"	31	Bulgan West	Agut	breccia		--	intense silicification	--	G, T
75	M99NK076R	48°47'49"	102°57'06.7"	31	Bulgan West	Agut	granite		secondary quartz by Mong.	--	--	T
76	M99NK077R	48°47'42.5"	102°56'51.8"	31	Bulgan West	Agut	trachyandesite		--	--	--	X
77	M99NK078R	48°49'10.5"	102°34'49.0"	26	Bulgan West	Ereen Ikher	dacite		lipalite by Mongolian	--	--	T
78	M99NK079R	48°49'31.4"	102°34'44.2"	26	Bulgan West	Ereen Ikher	breccia		--	silicification	--	G, T
79	M99NK080R	48°49'18.4"	102°42'15.7"	27	Bulgan West	Zairan	granite		drill core	purple mineral?	--	T, M
80	M99NK081R	48°47'31.2"	102°56'37.9"	31	Bulgan West	Agut	quartz vein		comb texture	--	pyrite	G
81	M99NK082R	48°52'00.0"	103°34'10"	SAR194	Bulgan	---	andesite		--	epidote, silicification	malachite	G
82	M99NK083R	48°45'28.1"	103°16'00.8"	35	Bulgan	Khar uul	andesite		fresh	--	--	W, T
83	M99NK084R	50°13'25.0"	101°45'20.0"	---	---	---	listwaenite		altered gabbro?	silicification, carbonatized	--	G, T
84	M99HH003M	49°50'59.3"	100°24'06.3"	14	Altgana gol	Altgana gol	quartz		--	--	molybdenite	G
85	M99HH008R	49°01'21.2"	104°08'18.5"	40	Erdenet	Northwest	granite~ granodiorite	Selenge Comp.	holocrystalline/int.~coarse	--	--	W, 34S, T, X, E

Table A-10 Description of rock and ore samples

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No.	Sample No.	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysis type
86	M99HH009R	49°01'08.6"	104°08'00.2"	40	Erdenet	Northwest	ore	Erdenet Comp.	whitish gray	(not identified)	pyrite, chalcocopyrite, molybdenite	O, T, X
87	M99HH010R	49°01'08.6"	104°08'00.2"	40	Erdenet	Northwest	andesite dyke	dyke	gray, aphanitic	--	--	W, T
88	M99HH011R	49°01'20.8"	104°07'02.3"	40	Erdenet	Northwest	ore-granodiorite	Erdenet Comp.	quartz, plagioclase, biotite, K-feldspar, pyroxene	(not identified)	pyrite, malachite	W, T, X
89	M99HH012R	49°01'20.8"	104°07'02.3"	40	Erdenet	Northwest	andesite dyke	dyke	dark green	(not identified)	pyrite	W, T, X
90	M99HH013R	49°13'17.4"	104°29'15.3"	SAR138	Erdenet	---	granite		coarse	--	--	W, T
91	M99HH014R	49°13'16.3"	104°36'46.1"	SAR139	Erdenet	---	basalt		gray	silicified, quartz+epidote vein	--	W, T
92	M99HH015R	49°13'19.3"	104°36'45.3"	SAR139	Erdenet	---	granodiorite		intermediate	---	---	W, T
93	M99HH017R	49°13'03.6"	104°36'34.4"	SAR139	Erdenet	---	granodiorite		intermediate	epidote	---	W, T
94	M99HH018R	49°13'03.6"	104°36'34.4"	SAR139	Erdenet	---	granodiorite		---	epidote, chlorite	---	T, X
95	M99HH020R	48°54'14.6"	103°57'15.8"	46	Erdenet	Zалу	diorite		intermediate/plagioclase, biotite, hornblende	---	---	T, X
96	M99HH021R	48°49'49.4"	103°48'06.5"	47	Erdenet	Danbatseren	dacite~andesite		pink	partly silicification	---	G, T
97	M99HH024R	48°47'46.6"	102°56'52.3"	31	Bulgan	Agut	silicified breccia		reddish brown	---	---	T
98	M99HH025R	48°47'34.9"	102°56'45.9"	31	Bulgan	Agut	altered rock		whitish gray	quartz+sericite	---	G, X
99	M99HH026R	48°47'34.9"	102°56'45.9"	31	Bulgan	Agut	silicified rock		---	quartz, hematite, limonite	---	G
100	M99HH032R	48°47'06.5"	103°26'64.2"	34	Bulgan	Jasin buuts	andesite		magnetite remains	weakly silicified	---	G, X
101	M99HH033R	48°47'02.5"	103°26'39.6"	34	Bulgan	Jasin buuts	quartz vein		brecciation	quartz (black streak)	---	G, T, X
102	M99HH034R	48°46'50.0"	103°26'16.0"	34	Bulgan	Jasin buuts	dacite or dacitic tuff		whitish	quartz+sericite	---	G, X

Table A-10 Description of rock and ore samples

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No.	Sample No.	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysis type
103	M99HH035R	48°46'50.4"	103°25'10.2"	34	Bulgan	Jasiin buuts	altered rock (andesite?)		whitish	quartz-sericite	---	G, X
104	M99HH036R	48°42'45.2"	103°31'50.3"	SAR221	Bulgan	---	quartz vein		---	quartz-thematite along fracture	---	G, X
105	M99HH038R	48°25'26.8"	103°56'39.8"	SAR M-1	Zaamar West	---	andesite		gray	chlorite along fracture	---	X
106	M99MZ001R	48°40'53.3"	102°08'08.6"	7	Uubulan	Sairin hundii	dacite		---	silicification	limonite	G
107	M99MZ002R	48°55'00.3"	101°53'19.6"	10	Uubulan	Gua ulaan uul	silicified rock		---	silicification	limonite	G, X
108	M99MZ003R	48°55'17.5"	101°52'54.4"	10	Uubulan	Gua ulaan uul	dacite		---	silicification	Fe-Mn oxides	G
109	M99MZ004R	48°43'41.0"	101°25'46.0"	11	Khujirt	Zost tolgoi	silicified breccia		---	silicification	limonite	G
110	M99MZ005R	48°43'41.0"	101°25'19.6"	11	Khujirt	Zost tolgoi	granite		medium grain	---	---	G
111	M99MZ006R	49°22'11.3"	100°09'33.4"	13	Murun South	Donhor bulag	silicified rock		light gray	silicification	pyrite dissemination	G, X
112	M99MZ007R	49°22'17.0"	100°09'36.6"	13	Murun South	Donhor bulag	silicified rock		platey	silicification	---	G
113	M99MZ008M	49°50'58.6"	100°24'02.9"	14	Altgana gol	Altgana gol	quartz veins		white	---	molybdenite	180, F
114	M99MZ009R	49°55'59.8"	100°21'06.4"	16	Altgana gol NW	Delger uul	ultra mafic rock		dark green	---	---	G, PT, E
115	M99MZ010R	50°39'12.3"	100°46'18.2"	20	Khokhoo	Hunit gol	granite		pink	---	---	G
116	M99MZ011M	50°38'16.4"	100°46'47.8"	20d	Khokhoo	---	Cu ore		quartz vein	---	malachite, chalcopyrite	G
117	M99MZ012M	50°26'13.9"	100°52'50.3"	20a	Khokhoo	---	Pb-Cu ore		quartz vein	---	galena, malachite	G
118	M99MZ013R	50°12'45.5"	101°31'29.3"	20b	Khokhoo	---	silicified rock		quartz veinlet	hydrothermal?	---	G
119	M99MZ014R	50°12'16.0"	101°37'18.2"	25c	South Camp	---	dunite		serpentinized	---	---	G, PT, E

Table A-10 Description of rock and ore samples

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No	Sample No	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysys type
120	M99MZ015R	49°01'18.1"	104°07'44.1"	40	Erdenet	Northwest	granitic rock	Erdenet complex	----	phylic alteration	pyrite and chalcopyrite dissemination	W, T
121	M99MZ016M	49°01'18.1"	104°07'44.1"	40	Erdenet	Northwest	quartz vein		----	B-vein	pyrite, chalcopyrite, covellite	34S, 190, F
122	M99MZ017R	49°01'21.8"	104°07'01.4"	40	Erdenet	Northwest	granitic rock	Erdenet complex	----	potassic alteration	pyrite dissemination	W, 34S, T
123	M99MZ018R	49°07'52.1"	103°38'52.4"	38	Erdenet	Khujirjin gol	granodiorite		----	potassic alteration?	----	G
124	M99MZ019R	49°07'41.0"	103°38'41.0"	38	Erdenet	Khujirjin gol	andesite		dark gray	----	magnetite	G
125	M99MZ020R	49°07'58.8"	103°38'13.9"	38	Erdenet	Khujirjin gol	monzonite		coarse	----	----	G
126	M99MZ021R	49°05'51.6"	103°35'49.3"	38	Erdenet	Khujirjin gol	diorite		medium grain	----	red hematite	G, PT
127	M99MZ022R	49°05'05.4"	103°59'00.0"	36	Erdenet	Talbulag	dacite		gray	----	----	G
128	M99MZ023R	49°06'53.0"	103°58'34.0"	36	Erdenet	Talbulag	volcanic rock		reddish gray	silicification	quartz veinlet	G
129	M99MZ024R	49°15'45.5"	103°55'23.8"	SAR25	Erdenet	Davaa	granite		coarse	----	----	G
130	M99MZ025R	49°14'54.4"	103°56'28.5"	SAR25	Erdenet	Davaa	granodiorite		micro grain	----	pyrite, limonite	G
131	M99MZ026R	49°02'48.6"	103°59'58.5"	36	Erdenet	Tsagaan chuluut	silicified rock		white	----	limonite along cracks	G, X
132	M99MZ027R	49°02'48.6"	103°59'58.5"	36	Erdenet	Tsagaan chuluut	silica sinter?		white	----	----	G
133	M99MZ028R	49°13'51.1"	104°14'05.0"	39	Erdenet	Zuuchin gol	andesite		----	silicification	malachite	G
134	M99MZ029R	49°13'17.3"	104°14'22.8"	39	Erdenet	Zuuchin gol	silicified rock		volcanic rock	silicification	----	G
135	M99MZ030R	48°56'34.0"	104°17'46.0"	42	Erdenet	Tourmaline	granitic rock		black colored	tourmaline-biotite	----	G
136	M99MZ031R	48°56'35.2"	104°17'44.6"	42	Erdenet	Tourmaline	syenite		medium grain	----	----	G, T

Table A-10 Description of rock and ore samples

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No	Sample No.	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysys type
137	M99MZ032R	48°56'38.8"	104°17'41.4"	42	Erdenet	Tourmaline	breccia		syenite	tourmaline network	---	G, X
138	M99MZ033R	48°56'27.5"	104°18'06.8"	42	Erdenet	Tourmaline	granitic rock		drill core	---	pyrite diss	G
139	M99MZ034R	48°53'29.0"	104°22'40.5"	SAR188	Erdenet	---	granodiorite		altered	epidote	---	G
140	M99MZ035R	48°53'29.0"	104°22'40.5"	SAR188	Erdenet	---	granitic rock		float	tourmaline	---	G
141	M99MZ036R	48°49'54.9"	104°13'37.0"	43	Erdenet	Under	granodiorite		---	k-feldsp. epidote	---	W, 34S
142	M99MZ037R	48°49'50.6"	104°13'37.0"	43	Erdenet	Under	granodiorite		sericite	limonite	---	G
143	M99MZ038R	48°49'38.7"	104°13'35.3"	43	Erdenet	Under	granodiorite		albite-epidote veinlet	---	---	G
144	M99MZ039R	48°49'34.2"	104°13'25.3"	43	Erdenet	Under	quartz porphyry		fresh?	---	---	W, 34S
145	M99MZ040R	48°49'33.5"	104°13'17.2"	43	Erdenet	Under	quartz porphyry		white to red	oxidization	---	G
146	M99MZ041R	48°57'52.0"	104°11'45.8"	45	Erdenet	Ouyt	granitic rock	Erdenet complex	drill core	potassium	primary chalcopyrite	34S
147	M99MZ042R	48°57'43.2"	104°11'52.3"	45	Erdenet	Ouyt	granodiorite porphyry	Erdenet complex	altered	sericitic	---	W
148	M99MZ043R	48°57'45.5"	104°11'52.3"	45	Erdenet	Ouyt	granodiorite porphyry	Erdenet complex	relatively fresh	---	---	W, T
149	M99MZ044R	48°57'52.0"	104°11'45.8"	45	Erdenet	Ouyt	granodiorite	Selenge complex	relatively fresh	---	---	W, 34S, T
150	M99MZ045R	48°43'37.4"	103°56'45.4"	SAR233	Erdenet	---	volcanic rock		---	silicification	---	W
151	M99MZ046R	48°43'40.2"	103°56'33.7"	SAR233	Erdenet	---	hydrothermal breccia		volcanic rocks	---	---	W
152	M99MZ047R	48°46'00.7"	104°04'31.3"	SAR235	Erdenet	---	aplitic rock		biotite	silicification	---	W
153	M99MZ048R	48°46'17.1"	104°04'34.6"	SAR235	Erdenet	---	granitic rock		---	silicification, sericite	limonite	W

Table A-10 Description of rock and ore samples

No.	Sample No.	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysis type
154	M99MZ049R	49°09'51.8"	103°44'54.3"	37	Erdenet	Megein gol	silicified rock		---	tourmaline?	---	G
155	M99MZ050X	49°01'16.0"	104°07'57.4"	40	Erdenet	Northwest	senoite	Erdenet complex	open pit	phylic alteration	sulfides	KA
156	M99MZ051R	49°01'14.2"	104°07'12.9"	40	Erdenet	Northwest	granitic rock	Erdenet complex	open pit	potassic alteration	sulfides	KA
157	M99MZ052R	48°48'11.2"	102°55'51.7"	30	Bulgan West	Urmiin tsgaan nuur	tuff breccia		---	---	---	G
158	M99MZ053R	48°48'05.0"	102°56'11.2"	30	Bulgan West	Urmiin tsgaan nuur	syenite		dyke	---	---	G
159	M99MZ054R	48°52'03.5"	102°49'43.8"	29	Bulgan West	Burged khyr	granitic rock		---	---	limonite	W
160	M99MZ055R	48°52'03.5"	102°49'43.8"	29	Bulgan West	Burged khyr	silicified rock		white	hypogene alunite	---	W, X
161	M99MZ056R	48°52'24.2"	102°49'51.4"	29	Bulgan West	Burged khyr	silicified rock		white	hypogene alunite	---	W
162	M99MZ057R	48°48'58.6"	102°47'00.0"	28	Bulgan West	Nongon	magnetic rock		granite origin	k-feldspar	magnetite	W, PT
163	M99MZ059R	48°49'11.5"	102°47'03.1"	28	Bulgan West	Nongon	granite		magnetite after mafic	replacement	magnetite	W
164	M99MZ060R	48°42'00.6"	102°45'47.9"	32	Bulgan West	Undrakh	quartz veinlet		granitic host	potassic alteration	malachite, chalcocite	G
165	M99MZ061M	48°45'27.9"	103°16'04.9"	33	Bulgan	Tsookher mert	quartz vein		granitic host	sericitic	limonite	G
166	M99MZ062M	48°45'28.1"	103°16'00.9"	33	Bulgan	Tsookher mert	quartz vein		granitic host	sericitic	azurite	G
167	M99MZ063R	48°45'28.1"	103°16'00.9"	33	Bulgan	Tsookher mert	granitic rock		host of qz vein	sericitic	---	G, X
168	M99MZ064M	48°45'27.3"	103°16'00.8"	33	Bulgan	Tsookher mert	quartz vein		granitic host	sericitic	malachite, azurite, chalcopyrite?	G, P
169	M99MZ065M	48°45'27.3"	103°16'00.8"	33	Bulgan	Tsookher mert	quartz vein		granitic host	sericitic	---	180, F
170	M99MZ066M	48°42'06.7"	103°16'21.3"	35	Bulgan	Khar uul	quartz veinlet		andesite host	epidote	Cu oxide	G

Table A-10 Description of rock and ore samples

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No.	Sample No.	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysis type
171	M99MZ067M	48°42'05.9"	103°16'20.8"	35	Bulgan	Khar uul	quartz veinlet		andesite host	epidote	Cu oxide	G
172	M99MZ068R	48°49'38.3"	103°39'11.0"	SAR197	Bulgan	---	quartz veinlet		andesite host	---	---	G
173	M99MZ069R	48°49'27.2"	103°39'21.4"	SAR197	Bulgan	---	brecciated rock		andesite	---	limonite	G
174	M99MZ070R	48°47'13.9"	103°39'44.0"	SAR205	Bulgan	---	quartz veinlet		andesite host	silicification + epidote	---	G
175	M99MZ071R	48°47'05.0"	103°39'45.8"	SAR205	Bulgan	---	andesite		altered	silicification + epidote	---	G
176	M99MZ072R	48°47'56.1"	103°35'54.2"	SAR202	Bulgan	---	quartz veinlet		andesite host	silicification + epidote	---	G
177	M99MZ073M	48°46'59.6"	103°35'18.4"	SAR204	Bulgan	---	quartz veinlet		andesite host	silicification + epidote	malachite	G
178	M99MZ074M	48°46'55.5"	103°35'28.0"	SAR204	Bulgan	---	quartz veinlet		andesite host	silicification + epidote	malachite	G
179	M99MZ075R	48°24'33.0"	103°56'49.9"	SAR M-2	Zaamar West	---	andesite		degassing	zeolite, silica	---	G
180	M99MZ076R	48°17'46.6"	104°13'54.1"	49	Zaamar West	Mt. Eagle North	tuff		pale green	silicification	---	G
181	M99RK001R	48°54'59.1"	101°52'53.7"	10	Uubulan	Gua ulaan uul	float, tuff breccia	Hostai series	trachy andesitic	white-reddish, acidic alteration, kaolin, limonite(hematite), weak silicification	---	G
182	M99RK002R	48°43'29.7"	101°25'46.1"	11	Khujirt	Zost tolgoi	dacitic tuff breccia		dacitic	reddish(white), moderate silicification, limonite(pyrite relict), sericite	---	G
183	M99RK003R	49°22'17.6"	100°09'55.0"	13	Murun South	Donhor bulag	float, quartz vein		white-clear	limonite stain	---	G
184	M99RK004R	49°22'17.6"	100°09'55.0"	13	Murun South	Donhor bulag	dacitic tuff breccia		white, fine-coarse grain	silicification, sericite	---	G
185	M99RK005M	49°51'03.3"	100°24'04.9"	14	Altgana gol	Altgana gol	quartz vein		(in trench), W>4cm, black band	limonite	molybdenite	G
186	M99RK006R	49°56'05.5"	100°20'57.8"	16	Altgana gol NW	Delger uul	basic tuff	North Mongolia fault zone	dark green, epidote+chlorite	calcite stain(W:10cm(Max))	---	G
187	M99RK007R	50°17'05.9"	100°18'12.7"	18	Khokhoo	Quartz	float, quartz vein		white-clear, coarse grain, W>10cm	limonite	---	G

Table A-10 Description of rock and ore samples

No	Sample No	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysis type
188	M99RK008R	50°31'06.3"	101°05'23.0"	20b	Khokhoo	---	quartz vein		white-clear, coarse grain, W:10cm(Max1m), L:3m, N70°W60°N, host:pelitic shist	weak limonite	---	G
189	M99RK009R	50°31'09.4"	101°05'06.5"	20b	Khokhoo	---	quartz vein		white, medium grain, W:<30cm, L:20m, N85°W60°N, host:pelitic shist	weak limonite(hematite)	---	G
190	M99RK010R	50°31'06.3"	101°05'23.0"	20b	Khokhoo	---	float, granite?		quartz vein?	silicification, weak limonite, greisen?(biotite+mica)	---	G
191	M99RK011R	50°34'25.4"	101°06'18.6"	20c	Khokhoo	---	quartz vein?		clear, coarse grain, W:5-10cm, host:gneiss	greisen? (biotite+muscovite)	---	G, T
192	M99RK012R	50°15'03.6"	100°17'00.6"	18	Khokhoo	Quartz	float, quartz vein		white-reddish, fresh grain, W>25cm	hematite	---	G
193	M99RK013R	50°14'03.3"	100°17'00.6"	18	Khokhoo	Quartz	quartz vein		clear, coarse grain, W>5cm, segregation vein?	limonite	molybdenite?	G, F
194	M99RK014R	50°14'03.3"	100°17'00.6"	18	Khokhoo	Quartz	limestone		white	strong silicification	---	G
195	M99RK015R	50°14'03.3"	100°17'00.6"	18	Khokhoo	Quartz	basalt? basic tuff?		green, metamorphosed	weak silicification	---	G
196	M99RK016R	50°14'15.0"	100°16'27.7"	18	Khokhoo	Quartz	limestone		white-milky, brecciated	weak silicification	---	G
197	M99RK017R	50°06'21.7"	101°36'05.7"	25a	South Camp	---	quartz vein		white, coarse grain, W:<10cm, host:aplitic granite	weak limonite	---	G
198	M99RK018R	50°16'35.8"	101°43'52.7"	25e	South Camp	---	float, quartz vein		white-clear, coarse grain, W<5cm, host:tuffaceous ss	weak limonite	---	G
199	M99RK019R	50°16'24.5"	101°44'01.5"	25e	South Camp	---	quartz vein		veinlet, NS80°E, host:sambitic shist	fluorite	---	G
200	M99RK020M	49°01'29.1"	104°07'42.4"	40	Erdenet	Northwest	silicified rock	Erdenet complex?	light gray	strong silicification, quartz+sericite, quartz vein(B-type vein), hypogene zone	chalcopyrite vein and dissemination, covelin along fracture	O, PT, E
201	M99RK021M	49°01'23.5"	104°07'00.8"	40	Erdenet	Northwest	granite	Erdenet complex?	quartz-biotite-k-feldspar-feldspar	silicification, limonite along crack, partly oxidized, potassic(biotite-k-feldspar)	quartz+chalcopyrite and pyrite vein, dissemination, malachite along crack	O, PT, E
202	M99RK022R	49°07'41.5"	103°38'41.5"	38	Erdenet	Khujirjin gol	float, granite		k-feldspar rich	quartz veinlet in(W:3mm), limonite	---	G
203	M99RK023R	49°07'57.3"	103°38'13.8"	38	Erdenet	Khujirjin gol	quartz vein		white-clear, coarse grain, W<30cm, host:yenite	quartz network, fluorite	---	G
204	M99RK024R	49°11'16.8"	104°02'14.4"	SARI44	Erdenet	---	silicified rock(granite)		---	silicification(W:20cm), epidote, quartz vein in, biotite rich	---	G

Table A-10 Description of rock and ore samples

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No	Sample No	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analyses type
205	M99RK025M	48°11'16.8"	104°02'14.4"	SAR144	Erdenet	----	granite		plagioclase+biotite+quartz+k-feldspar	potassic(k-feldspar+biotite), limonite	malachite along fracture (2*3m)	G
206	M99RK025R	48°11'16.8"	104°02'14.4"	SAR144	Erdenet	----	granite		plagioclase+biotite+quartz+k-feldspar(minor)	potassic alteration? (biotite rich)	--	W, T
207	M99RK026M	48°11'16.8"	104°02'14.4"	SAR144	Erdenet	----	granite		plagioclase+biotite+quartz+k-feldspar	potassic(k-feldspar+biotite), limonite	malachite, chalcocopyrite	PT
208	M99RK027R	48°13'32.6"	104°01'23.1"	SAR136	Erdenet	----	aplite		reddish, quartz+k-feldspar	quartz vein	---	G
209	M99RK028R	48°13'29.7"	104°13'58.9"	39	Erdenet		granite	Selenge complex	biotite+plagioclase+quartz, equigranule	---	---	G
210	M99RK029R	48°59'53.2"	104°09'20.9"	41	Erdenet	Central	granite		quartz+biotite+plagioclase+k-feldspar	moderate silicification, quartz+sericite+mica+tourmaline, limonite	---	G
211	M99RK030R	48°59'51.5"	104°09'27.5"	41	Erdenet	Central	granite	Selenge complex?	biotite+plagioclase+quartz(minor)+k-feldspar(minor)	quartz vein in	---	W, T
212	M99RK031M	48°59'46.3"	104°09'26.4"	41	Erdenet	Central	granite	Selenge complex?	plagioclase+biotite+k-feldspar+quartz	potassic, weak limonite	malachite along cracks	G, T
213	M99RK032M	48°59'55.5"	104°09'26.1"	41	Erdenet	Central	diorite	Erdenet complex?	phenocryst:biotite+plagioclase, fine grain	epidote, limonite	malachite along cracks	G
214	M99RK032R	48°59'55.5"	104°09'26.1"	41	Erdenet	Central	diorite	Erdenet complex?	phenocryst:biotite+plagioclase, fine grain	epidote	---	W, T
215	M99RK033R	48°51'22.7"	104°26'49.6"	SAR200	Erdenet	----	aplite		dyke	quartz vein, quartz+magnetite	---	G
216	M99RK034R	48°44'33.5"	104°11'03.5"	SAR238	Erdenet	----	granite		equigranule, coarse grain, biotite+plagioclase+quartz+k-feldspar	quartz+tourmalin vein in	---	G
217	M99RK035R	48°44'33.5"	104°11'03.5"	SAR238	Erdenet	----	granite		medium grain, quartz(rich)+biotite+plagioclase+k-feldspar	---	---	T, M
218	M99RK036R	48°44'33.0"	104°10'59.9"	SAR238	Erdenet	----	granite		equigranule, coarse grain, biotite+plagioclase+quartz+k-feldspar	epidote	---	T, M
219	M99RK037R	48°45'01.9"	104°12'37.2"	SAR238	Erdenet	----	quartz vein		clear, W:3cm, N25°E65°E, host:granite	---	---	G
220	M99RK038R	48°45'01.9"	104°12'37.2"	SAR238	Erdenet	----	granite		quartz+plagioclase+k-feldspar+biotite	quartz vein in	---	W, T
221	M99RK039M	48°45'39.5"	104°12'16.5"	44	Erdenet	Shand	granite	Selenge complex	biotite+k-feldspar+plagioclase+quartz	k-feldspar rich, weak limonite	malachite along cracks	G

Table A-10 Description of rock and ore samples

No	Sample No.	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysis type
222	M99RK040R	48°45'39.5"	104°12'16.5"	44	Erdenet	Shand	andesite porphyry		dark gray, phenocryst:plagioclase	--	--	T
223	M99RK041R	48°42'20.0"	103°56'11.7"	SAR233	Erdenet	---	float, silicified rock		granite?	silicification, hematite, chlorite?	--	G
224	M99RK042R	48°46'22.4"	104°04'30.4"	SAR235	Erdenet	---	granite		quartz+k-feldspar+biotite	weak silicification(W:10m)	--	G
225	M99RK043R	48°46'33.3"	104°04'26.0"	SAR235	Erdenet	---	aplite		reddish	silicification, chlorite?	--	G
226	M99RK044R	49°20'07.1"	104°09'57.3"	SAR127	Erdenet	---	granodiorite		iquigranule, coarse grain, biotite+plagioclase+k-feldspar	--	--	W, T
227	M99RK045R	48°48'24.5"	102°56'00.5"	30	Bulgan West	Urmin tsgaan nuur	lapilli tuff		fragment plagioclase+k-feldspar	--	--	G
228	M99RK046R	48°48'06.9"	102°55'40.9"	30	Bulgan West	Urmin tsgaan nuur	lapilli tuff		fragment plagioclase+k-feldspar	silicification	--	G
229	M99RK047R	48°48'03.8"	102°55'35.7"	30	Bulgan West	Urmin tsgaan nuur	lapilli tuff		fragment plagioclase+k-feldspar	silicification, quartz vein in (W:2mm, coarse grain, white)	--	G
230	M99RK048R	48°49'08.7"	102°34'86.9"	26	Bulgan West	Ereen ikher	silicified rock		lapilli tuff? trachite?	moderate silicification, sericite?, limonite	--	G, X
231	M99RK049R	48°49'08.7"	102°34'86.9"	26	Bulgan West	Ereen ikher	lapilli tuff		fragment:k-feldspar+biotite	moderate silicification, limonite	--	G
232	M99RK050R	48°49'08.7"	102°34'86.9"	26	Bulgan West	Ereen ikher	lapilli tuff		fragment:k-feldspar+biotite	moderate silicification, limonite, calcite stain	--	G, X
233	M99RK051R	48°49'08.7"	102°34'86.9"	26	Bulgan West	Ereen ikher	lapilli tuff		fragment:k-feldspar+biotite	silicification, white, sericite?, limonite	--	G, X
234	M99RK052M	48°48'09.8"	102°42'12.5"	27	Bulgan West	Zaiian	granite		quartz+biotite+plagioclase+k-feldspar, fine grain	limonite stain, potassic alteration	malachite	G
235	M99RK053M	48°49'04.7"	102°41'57.2"	27	Bulgan West	Zaiian	granite		quartz+biotite+plagioclase+k-feldspar	strong limonite, silicification	malachite, azurite	G
236	M99RK054R	48°42'03.7"	102°45'43.9"	32	Bulgan West	Undrakh	quartz vein		aplite?	limonite	malachite, chalcopyrite, bornite	G
237	M99RK055M	48°42'03.7"	102°45'43.9"	32	Bulgan West	Undrakh	granite		quartz+(biotite)+k-feldspar	limonite	malachite along fracture	G
238	M99RK056M	48°42'04.7"	102°45'47.7"	32	Bulgan West	Undrakh	granite		quartz+(biotite)+k-feldspar	potassic alteration, weak silicification, mica	malachite	T

Table A-10 Description of rock and ore samples

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No	Sample No	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysys type
239	M99RK057M	48°42'04.7"	102°45'47.7"	32	Bulgan West	Undrakh	granite		quartz+(biotite)-(k-feldspar)	limonite, potassic alteration, weak silicification, mica, quartz vein	malachite	G, T
240	M99RK058R	48°47'01.9"	103°26'38.5"	34	Bulgan	Jasiin buuts	dacite?		quartz+biotite	white, strong silicification, pyrite rich (limonite), mica	---	G
241	M99RK059R	48°47'01.9"	103°26'38.5"	34	Bulgan	Jasiin buuts	dacite?		quartz+biotite	white, moderate silicification, pyrite rich(limonite)	---	G, X
242	M99RK060R	48°47'39.2"	103°25'45.2"	34	Bulgan	Jasiin buuts	dacite?		quartz+biotite	white, silicification, pyrite(limonite)	---	G, X
243	M99RK061R	48°47'39.2"	103°25'45.2"	34	Bulgan	Jasiin buuts	dacitic tuff		lapilli tuff, fragments:quartz+biotite	moderate silicification, pyrite rich limonite along crack, sericite?, mica	---	G, X
244	M99RK062R	48°47'39.2"	103°25'45.2"	34	Bulgan	Jasiin buuts	silicified rock		dacitic tuff? dacite?	strong silicification, limonite along crack, sericite?, mica	---	G
245	M99RK063R	48°42'46.5"	103°31'39.2"	SAR221	Bulgan	----	silicified rock		w:10cm, N70°E90°, host:andesite	silicification, epidote, quartz veinlet	---	G
246	M99RK064R	48°43'33.3"	103°31'43.8"	SAR222	Bulgan	----	andesite		porphyritic, phenocryst:plagioclase	silicification, quartz veinlet in	---	G
247	M99RK065R	48°43'57.0"	103°31'03.1"	SAR219	Bulgan	---	silicified rock		andesite?, phenocryst:plagioclase	white, silicified, sericite?	---	G, X
248	M99RK066R	48°52'47.1"	103°38'34.4"	SAR183	Bulgan	----	float, epidote vein		host:andesite	silicified, epidote, quartz veinlet in	---	G
249	M99RK067M	48°52'41.5"	103°38'23.4"	SAR183	Bulgan	----	epidote+quartz vein		host:andesite	silicification, epidote	malachite	G
250	M99RK068M	48°52'46.8"	103°35'13.2"	SAR182	Bulgan	----	epidote vein		W:3-5cm, L:5m, N55°E, host:trachitic andesite	silicified, epidote	malachite	G
251	M99RK069R	48°53'39.8"	103°37'44.6"	48	Bulgan	Mt. Zain gobaav	white altered rock		andesite?	weak silicification, weak pyrite dissemination, limonite, kaoline	---	G, X
252	M99RK070R	48°53'39.8"	103°37'44.6"	48	Bulgan	Mt. Zain gobaav	white altered rock		andesite?	weak silicification, pyrite dissemination, limonite	---	G, X
253	M99RK071R	48°53'39.8"	103°37'44.6"	48	Bulgan	Mt. Zain gobaav	altered rock		andesite?	brown, strong limonitization, montmorillonite?	---	G, X
254	M99RK072R	48°53'39.8"	103°37'44.6"	48	Bulgan	Mt. Zain gobaav	altered rock		andesite?	brown, strong limonitization	---	G
255	M99RK073R	48°53'39.8"	103°37'44.6"	48	Bulgan	Mt. Zain gobaav	altered rock		andesite?	yellow-brown, limonite, weak acid leached	---	G, X

Table A-10 Description of rock and ore samples

(16/16)

No.	Sample No.	Latitude(N)	Longitude(E)	Survey point	Region	Occurrence	Rock Name	Geological Unit	General Description	Alteration	Mineralization	Analysis type
256	M99RK074R	48°53'39.8"	103°37'44.6"	48	Bulgan	Mt. Zain gobaav	white altered rock		andesite?	moderate silicification, pyrite dissemination, limonite	--	G
257	M99RK075M	48°52'39.0"	103°34'45.5"	SAR181	Bulgan	----	andesite		phenocryst:hornblende+plagioclase	moderate silicification, epidote, hematite, 1*0.6cm	malachite	G
258	M99RK076M	48°51'53.7"	103°34'02.0"	SAR194	Bulgan	----	andesite		phenocryst:hornblende+plagioclase	epidote, silicification, quartz vein(W:3-5cm)	malachite	G
259	M99RK077R	48°53'47.1"	103°37'45.0"	48	Bulgan	Mt. Zain gobaav	float, white altered rock		andesite?	white, kaoline?, weak silicification	--	G
260	M99RK078R	48°53'39.2"	103°37'46.7"	48	Bulgan	Mt. Zain gobaav	andesite		phenocryst:pyroxene+hornblende+plagioclase	weak silicification, epidote, hematite	malachite	G

Analysis type

G: ICP/Au+27elements)

W: Petrological chemical analysis

O: Ore grade assay

34S: Sulfur isotope composition

18O: Oxygen isotope composition

KA: K-Ar radiometric age

T: Observation of thin sections

P: Observation of polish sections

PT: Observation of polish and thin sections

X: Powderly X-ray diffraction

F: Temperature and chlorine consistency of fluid inclusions

E: EPMA

M: Modal composition of granitic rock

Table A-11 Description of pan concentrated samples

No.	Sample	N	E	Survey Point No.	Area	Geology	Geol. Unit	Width(m)	Flow	Size	Color	Comments
1	M99HH501P	50°13'27.1"	101°39'32.0"	25f	Southern Camp	gravel		---	---	3	brown	trench
2	M99HH502P	50°13'12.6"	101°38'51.3"	---	Southern Camp	---		3	2	2	dk brown-black	Erdenbulgan Camp site
3	M99MZ501P	49°51'05.4"	100°23'58.2"			aplite		5	3	1	reddish brown	
4	M99MZ502P	49°55'59.8"	100°21'06.4"	16	Altgana gol	serpentinite		30	4	1	reddish gray	
5	M99MZ503P	50°17'07.8"	100°18'11.7"	18	Altgana gol NW	limestone		10	0	1	gray	
6	M99MZ504P	50°38'24.3"	100°46'56.9"	20	Khokhoo	granite		3	4	1	reddish brown	
7	M99MZ505P	50°25'29.2"	100°55'55.7"	20a	Khokhoo	granodiorite		5	3	1	reddish brown	
8	M99MZ506P	50°30'40.8"	101°12'33.7"	20c	Khokhoo	granitoid		25	4	1	reddish brown	
9	M99MZ507P	49°08'22.7"	103°40'13.8"	38	Erdenet	granodiorite		5	3	1	reddish brown	
10	M99MZ508P	48°56'27.5"	104°18'06.8"	42	Erdenet	granitic rock		5	3	1	d-brown	
11	M99MZ509P	48°50'00.8"	102°45'21.8"	27	Bulgan West	volcanics		2	3	1	reddish brown	
12	M99MZ510P	48°43'54.7"	103°23'31.4"	33	Bulgan	volcanics		2	3	1	reddish brown	
13	M99MZ511P	48°47'25.1"	103°39'39.8"	SAR205	Bulgan	andesite		5	4	1	dark grey	
14	M99RK500P	49°06'04.1"	103°23'50.2"	38-SAR	Erdenet	basalt, basic tuff		6	3	2	brown	rock fragments rich
15	M99RK501P	49°05'25.6"	104°00'39.9"	36	Erdenet	dacitic andesite		0.6	1	2	reddish brown	rock fragments rich
16	M99RK502P	49°06'55.2"	104°01'63.1"	SAR136	Erdenet	granite	Selenge complex?	1	1	2	reddish brown	rock fragments, Magnetite
17	M99RK503P	48°51'17.7"	104°25'18.5"	SAR200	Erdenet	granite	Selenge complex?	2	3	2	brown	rock fragments rich
18	M99RK504P	49°20'42.7"	104°07'34.0"	SAR127	Erdenet	granodiorite	Selenge complex?	1	2	3	dark grey	magnetite rich

Table A-12 Microscopic observation on polished-thin or thin sections

(4/4)

No.	Sample 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
67	M99RK044R	Augite bearing biotite hornblende quartz gabbro	○	⊙		△		⊙					△											○	
68	M99RK056M	Biotite bearing quartz monzonite porphyry	⊙	⊙		△																			
69	M99RK057M	Biotite quartz monzonite porphyry	⊙	⊙		○																			
70	M99NK008M	Serpentinized dunitite								△															
71	M99NK055M	Aphyric basalt		⊙																					Chromian spinel (·)
72	M99MZ009R	Serpentinized harzburgite																							Clay minerals (⊙), secondary biotite (△)
73	M99MZ014R	Serpentinized harzburgite																							Chromian spinel (·)
74	M99MZ021R	Gabbro				○																			Chromian spinel (·)
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: orthopyroxene, cpx: clinopyroxene, ga: garnet, sph: sphene, zi: zircon, ap: apatite, op: opaque minerals (mainly iron oxide)

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