

APPENDIX

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Table A-1 List of published geological, economical, and political paper or reports about the Central North area, reserved through this survey (1 / 5)

TITLE	DATE	AUTHOR	SOURCE
A molybdenum-copper porphyry of the deposit Erdenetyn Ovoo(Mongolia)	1989	S.P. GAVRILOVA, I.E. MAKSIMUK, D. OROLMAA	Geological Ministry of USSR
Central Asian fold belt: Geodynamic evolution and formation history	1994	A. A. MOSSAKOVSKY, S. V. RUZHENTSEV, S. G. SAMYGIN, and T. N. KHERASKOVA	Geotectonics. English translation, vol.27, no.6
Endogenous rare metal ore formations and rare metal metalogeny of Mongolia	1995	V. I. KOVALENKO and V. V. YARMOLYUK	Economic Geology vol.90, pp.520-529
Erdenet-world's newest porphyry copper-moly mine	1982	George O. ARGALL, Jr.	World Mining (October), p.58-59
Extraction of clay mineral alteration zone in eastern Mongolia using JERS-1 data	1998	Takashi OOKA, Hideya METSUGI, Manabu KAKU, and Kazuhiro ADACHI	Bulletin of the Geological Survey of Japan, vol.48(6), p.275-290
Fluorite deposits in Mongolia: an outline	1998	Jargalyn LKHAMSUREN and Satoshi HAMASAKI	Bulletin of the Geological Survey of Japan, vol.48(6), p.309-318
Geology of northern Eurasia			
Gigantic paleolandslide associated with active faulting along the Boad fault (Gobi-Altay, Mongolia)	1999	Herve PHILIP and Jean-Francois RITZ	Geology, vol.27, No.3, p.211-214
Guide to the geology and mineral resources of Mongolia	1996	D.JARGALSAIHAN, M.KAZMER, Z.BARAS, D.SANJAADORJ (Editor)	Geological Exploration, Consulting and Services Co. Ltd
Heat flow, structure and evolution of the lithosphere of Mongolia	1989	M. D.KHUTORSKOY and V.V. YARMOLUK	Tectonophysics, 164, p.315-322. Elsevier Science Publishers B.V., Amsterdam-Printed in The Netherlands
K-Ar dating of granitoids and hydrothermal micas from the northern part of Kherlen depression, Mongolia	1998	S. MURAO, D. DORJGOTOV and T. TSEDEN	Bulletin of the Geological Survey of Japan, vol.48(6), pp.249-255
Lake's island arc terrane	1996	G. BAT-ERDENE, YA. BAT-IREEUIJ, O. TOMURTOGOO, A.S. GIBSHER, and Y.C. SOVETOV	Guidebook for
Magmatism and metallogenic systematics of the southern Ergun Mo. Cu, Pb, Zn and Ag belt, Inner Mongolia, China	1995	Ke-Zhang QIN, Zhi-Tian WANG and Long-Ju PAN	Resource Geology Special Issue, No.18, p.159-169
Metallogeny of the Mongolian People's Republic(copper, molybdenum)	1985	V.I. SOTNICOV, M. JAMSRAN, A.P. BERZINA, A.E. SHABOLOVSKII, D. GARAMJAV, D. BOLD	The Academy of science of the USSR, The Academy of science of the MPR
Mineral deposits of the world -ores, industrial minerals and rocks-	1994	M. VANECEK	Developments in Economic Geology 28
Mineral resources of the western part of the Mongol-Okhotsk foldbelt	1995	Ochir GEREL	Resource Geology Special Issue No.18
Mongolia -Getting into steppe with natural resources-	1997		Advertisement Supplement to Mining Journal, vol.328, No.8418
Mongolia Investor's conference on oil/gas and mining	1997		The World Bank/ The Government of Mongolia

Table A-1 List of published geological, economical, and political paper or reports about the Central North area, reserved through this survey (2 / 5)

TITLE	DATE	AUTHOR	SOURCE
Mongolian geoscientist No.3	1997	Japan International Cooperation Agency	
Mongolia's gold potential	1996	R. H. SILLITOE	Mining Magazine -July, p.12-15
On prospecting for porphyry copper mineralization in intracontinental mobile zones (Mongol-Okhotsk belt, Mongolian People's Republic)	1989	P.V KOVAL, A. GOTOVSUREN, S. ARLUNBILEG and Yu.I. LIBATOROV	Journal of Geochemical Exploration, 32, p.369-380. Elsevier Science Publishers B.V., Amsterdam- Printed in the Netherlands
Organic geochemistry and palynology of lower Cretaceous Zuunbayan oil shales, Mongolia	1988	Masanobu YAMAMOTO, Delegin BAT-ERDENE, Purejii ULZIIKHISHIG, Yoshio WATANABE, Moberu IMAI, Yoshiteru KAJIWARA, Nobuyori TAKEDA and Terumasa NAKAJIMA	Bulletin of Geological Survey of Japan, vol.49(6), p.257-274
Paleozoic sedimentary basins and volcanic-arc systems of southern Mongolia. New stratigraphic and sedimentologic constraints	1997	Melissa A. LAMB and Gombosuren BADARCH	International Geology Review, vol.39, pp.542-576
Phanerozoic felsic magmatism and related mineralization in Mongolia	1988	Ochir GEREL	Bulletin of the Geological Survey of Japan, vol.49(6), pp.239-248
Preliminary study on the characteristics of Tsagaan tsakhir uul gold deposit, Bayankhongor, southern Mongolia	1988	Sereenen JARGALAN and Satoshi MURAO	Bulletin of the Geological Survey of Japan, vol.49(6), p.291-298
Previous studies on the Erdenetin ovoo porphyry copper-molybdenum deposit, Mongolia	1988	G. DEJIDMAA and K. NAITO	Bulletin of the Geological Survey of Japan, vol.49(6), pp.299-308
Scientific communications. New 40Ar/39Ar age data and implications for porphyry copper deposits of Mongolia	1988	Melissa A. LAMB and Dennis COX	Economic Geology vol.93, pp.524-529
South China in Rodinia: Part of the missing link between Australia-east Antarctica and Laurentia?	1995	Zheng-Xiang LI, Linghua ZHANG, and Christopher McA POWELL	Geology, vol.23, No.5, p.407-410
Tectonic framework of the Bayankhongor area, west Mongolia	1986	Yoji TERAOKA, Morihisa SUZUKI, Floragin TUNGALAG, Niidengin ICHINOROV and Yukio SAKAMAKI	Bulletin of the Geological Survey of Japan, vol.47(9)
The central Siberia-Mongolia transect	1983	YU. Z. ZORIN, V. G. BELICHENKO, YE. KH. Turutanov, V. M. KOZHEVNIKOV, S.V. RUZHENTSEV, A.B. DERGUNOV, I.B. FILIPPOVA, O. TOMURTOGOO, N. ARVISBAATOR, TS. BAYAGALIAN, CH. BYAMBA, and P. KHOSBAYAR	Geotectonics, vol.27, no.2, p.103-117
The discovery of late Devonian (Frammian) conodonts in the Bayankhongor area, west Mongolia	1987	Chikao KURIMOTO, Niidengin ICHINOROV, Toshio KOIKE, Floragin TUNGALAG and Lkhamsuren BAYARMANDAL	Bulletin of the Geological Survey of Japan, vol.48(9), p.487-491
The peralkaline granite-related Khalitzan-Buregtey rare metal (Zr, Nb, REE) deposit, western Mongolia	1985	V. I. KOVALENKO, G.M. TSARYEVA, A.V. GOREGLYAD, V.V. YARMOLYUK, V.A. TROITSKY, R.L. HERVIG, and G.L. FARMER	Economic Geology, vol.90, p.530-547
The role of regional lithochemisrty in mineral exploration	1984	Pavel V. KOVAL	Journal of Geochemical Exploration, 21, pp.201-208, Elsevier Science Publishers B.V., Amsterdam- Printed in the Netherlands
The structure and development of the Baikal rift depression	1983	Victor D. MATS	Earth Science Reviews, 34, p.81-118, Elsevier Science Publishers B.V., Amsterdam

Table A-1 List of published geological, economical, and political paper or reports about the Central North area, reserved through this survey (3/5)

TITLE	DATE	AUTHOR	SOURCE
The tectonic evolution of Asia	1996	An YIN, T. Mark HARRISON (Editor)	Cambridge University Press
The use of tourmaline in geochemical prospecting for gold and copper mineralization	1991	P.V. KOVAL, L.D. ZORINA, N.A. KITAJEV, A.M. SPIRIDONOV, and S. ARIUNBILEG	Journal of Geochemical Exploration, vol.40, p.349-360. Elsevier Science Publishers B.V., Amsterdam
Timing of formation of forebergs in the northeastern Gobi Altai, Mongolia: implications for estimation mountain uplift rates and earthquake recurrence intervals	1999	Lewis A. OWEN, Dickson CUNNINGHAM, Benedict W. M. RICHARDES, Edward RHODES, Brian F. WINDLEY, Dorj DORJUMJAA, and Jalbuuin BADAMGARAY	Journal of the Geological Society, London., vol.156, p.457-464., Printed in Great Britain
Lonely planet -Mongolia- 2nd Edition	1997	P. GREENWAY, R. STOREY, G. LAFITTE	Lonely Planet Publications, pp. 282
Geological ore deposits in Mongolia People's Republic	1991	Mineral Resources Information Center, Metal Mining Agency of Japan	NO.105, pp. 47, 1991
In the earth of Gobi	1984	Fumio Kishimoto	Chishitsu News, Vol.357, p.47-51
Chapter 8 Tectonics outline of the Asiatic Continent Chapter 9 Geological outline of the northeast Asia area	1979	Akiho Miyashiro (Chapter 8) Н.Л. Д о б р е ц о в, Б.М. Ч и к о в (Chapter 9)	Iwanami geoscience course 16, Geology of the world, p.237-299
Project finding report, Mongolia	1999	Japan Mining Engineering Center for International Cooperation	MMAJ-JMEC internal report
Evaluation report of the mine development project, Mongolia	1998	Japan Mining Engineering Center for International Cooperation	MMAJ-JMEC internal report
Visiting Erdenet mine, Mongolia	1999	Kazuki Naito, Sadahisa Sudo	Chishitsu News, Vol.534, p.19-30
Volcanism of Mongolia	1999	Satoshi Kanisawa	Chishitsu News, Vol.534, p.31-40
Mineral resources of Mongolia	1990	Terumasa Nakajima	The new metal industry, summer No., 1990, Vol.35, p.66-69
The recent mining situation, Mongolia -investment environment and development of gold deposit-	1997	Mineral Resources Information Center, Metal Mining Agency of Japan	Mining information of foreign countries, July, p.105-120
Geology and survey research activities of Mongolia	1999	Yuhei Takahashi	Bulltain of geological survey of Japan, Vol.50, No.4, p.279-289
Development of the porphyry copper deposit, Mongolia	1979	Fumio Kishimoto	Chishitsu News, Vol.299, p.49-55
Journey to Mongolia	1991	Takeo, Sato	Chishitsu News, Vol.438, p.39-51
Development of mineral resources, Mongolia -present conditions and problems-	1999	Yukio, Sakamaki	Shigen-to-Sozai, Vol.115, No.12, p.865-870
Economic cooperation series in terms of developing countries, No.18 Asia -Mongolia-	1999	Association for Promotion of International Cooperation	pp.85

Table A-1 List of published geological, economical, and political paper or reports about the Central North area, reserved through this survey (4 / 5)

TITLE	DATE	AUTHOR	SOURCE
Молибден-Медно-Порфирирове Месторождени е Эрдэнэтийн-Овоо (МНР) A Molybdenum-Copper Porphyry Deposit - Erdenetyn Ovoo (Mongolia)	1989	С.П. Гаврилова, И.Е. Максимиук, Д. Ор олмаа S.P. Gavrilova, I.E. Maksimuk, D. Orolmaa	The Academy of science of the USSR Mineralogy, Geochemistry and Crystallochemistry of Rare Elements pp.39 Institute of Soviet-Mongolian joint
Металлогения Монгольской Народной Респуб лики (Медь, Молибден) Metallogeny of the Mongolian People's Republic (Copper, Molybdenum)	1985	В.И. Сотников, М.Жамсран, А.П. Берзи на, А.Е. Шабаловский, Д. Гарамжав, Д. Болд Shticov, M. Jamsran, A.P. Berzina, A.E. Shabolovskii, D. Garajav, D. Bold	The Academy of science of the USSR and MPR research geological expedition pp.39 Soviet-Mongolian joint
Металлогения Монгольской Народной Респуб лики (Золото) Metallogeny of the Mongolian People's Republic (Gold)	1986	Ю.Г. Щербаков, Г.Дэжидмаа, Ю.А. Кали нин, С.Р.Осинцев, Н.А. Росляков Yu.G. Sherbakov, G. Dejiddmaa, Yu.A. Kalinin, S.R. Osintsev, N.A. Roslyakov	The Academy of science of the USSR and MPR research geological expedition pp.49 Soviet-Mongolian joint
Меднорудные Формации МНР Copper-bearing Formation of the MPR	1985	Ответственный Редактор Акаде мик В.А. Кузнецов Responsible Editor: Academician V.A. Kuznetsov	Nabosibirsk, Edited by "Nauka" Siberian branch p.1-76
СП"Эрдэнэт": 20 Лет Эффективной Деятельнос ти И Постоянного Развития "Erdenet" 20 years of effective activity and stable development	1988	И.Ш.Сатаева, А.Базара I.Sh.Sataev, A.Bazar (Ed)	Г.Эрдэнэт, Монголия Erdenet, Mongolia pp.108
Отличительные Черты Средне-И Позднепале озойских Гранитоидных Комплексов Северн ой Монголии Distinguishing feature of the middle and late Paleozoic granitoid complexes of North Mongolia	1991	Д. Гарам D. Garam	Soviet-Mongolian science investigation joint expedition, Moscow, Geological Institute of Academy of Science of MPR, Ulaanbaatar, Series of Geology, no. 11, p.77-86
Определяющие Элементы Генетической Моде ли Медно-Молибден-Порфировой Рудно-Магма тической Системы Defining elements of genetic model for a copper-molybdenum porphyry ore-magmatic system	1991	В.И. Сотников, А.П. Берзина, А.Л. Пав лов, В.А. Пономарчук, А.Н. Берзина, В.О. Гимон, А.В. Травин V.I.Sotnikov, A.P.Berzina, A.L.Pavlov, V.A.Ponomarchuk, A.A.Berzina, V.O.Gimon, A.V.Travin	Institute of geology and geophysics, Siberian section of Academy Science of USSR, Novosibirsk deposits, May-June, no. 3, p.61-66
Рудно-Магматические Системы Разных Геоди намических Обстановок Ore-magmatic systems of various geo-dynamic situations (in an example of copper- molybdenum deposits of Mongolia)	1991	А.П. Берзина, В.И. Сотников A.P.Berzina, V.I.Sotnikov	Reports of Academy of Science of URRS, 961 vol. 316, no. 4, p.957-
Этапы Формирования Эрдэнэтского Молибде н-Медно-Порфирового Месторождения (Монгол ия) Erdenet molybdenum-copper porphyry deposit (Mongolia)	1991	С.П. Гаврилова, И.Е. Максимиук S.P.Gavrilova, I.E.Maksimuk	Soviet-Mongolian joint geological expedition of AS of USSR and AS of MPR, Geology of ore deposits, Nov.-Dec., no. 6, p.3-17

Table A-1 List of published geological, economical, and political paper or reports about the Central North area, reserved through this survey (5 /5)

TITLE	DATE	AUTHOR	SOURCE
Эволюция Изотопного Состава Водорода В Магматическом Процессе На Месторождении Эрденэтуин-Ово The evolution of isotope content of hydrogen in magmatic process at the Erdenetyн Ovoo deposit	1980	А.П. Берзина, Й. Курода, В.И. Сотников A.I. Berzina, Y. Kuroda, B.I. Sothonov	Institute geology and geophysics of 60 yr. USSR Siberian section of Academy Science, Novosibirsk The lectures of Academy Science of USSR, vol. 310, no.4, p.952-954
Этапы Развития Позднепалеозойского Магматизма Северной Монголии И Связанные С Ним Интрузивные Комплексы Development stages of the late Paleozoic magmatism in the Northern Mongolia and intrusive complexes	1985	В.А. Павлов, Р.М. Яшина, Д. Гарам V.A. Pavlov, R.M. Yashina, D. Garam	Soviet-Mongolian geological joint expedition. IGEM of Academy Science of USSR, Moscow
Одородогенной Металлогении Монголии Pre-oregenic metallogeny of Mongolia	1980	Е.С. Контарь, Л.Е. Либарова, Т.Ганбаатар E.S. Kontari, L.E. Libarova, T. Ganbaatar	Ministry of geology and mining industry of MRP, Ulaanbaatar Geology of ore deposits, Nov.-Dec., no. 6, p.72-78

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (1a/17)

No.	Deposit name	Deposit type	Location				Geology							Deposit (1)		
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenic province	Country rock	Alteration	Age of mineralization
22	Tamir gol	Metamorphogenic	Arkhangai	47 35 54	102 07 06	Mongol-Ubur bi ykal	Khangai	Uplift		meta-shale, shale, quartzite	Paleozoic(PZ)	East Khangai	meta-shale, shale, quartzite			
23	Ikh zagzag uul	Contact metamorphism	Bulgan	48 16 00	104 12 45	North mongolia	Tariat-Selenge	Fault	granite	metamorphic rocks	Devonian	North Mongolia	metamorphic rocks			
24	Erdeneim ovoo (Central part)	Hydrothermal	Orkhon	49 01 00	104 08 00	North Mongolia	Tariat-Selenge	Depression	granodiorite, diorite			North Mongolia	granodiorite, diorite	Oxidation zone		
33	Erdeneim ovoo (SE) and Oyuit	Stockwork	Orkhon	48 58 00	104 12 00	North Mongolia	Orkhon-selenge	Uplift	intrusion?			North Mongolia	intrusion?			
34	Erdeneim ovoo	Stockwork	Orkhon	49 01 02	104 07 08	North Mongolia	Orkhon-selenge	Uplift	intrusion?			North Mongolia	intrusion?			
81	Khusheet gol	Metasomatic	Bulgan	48 14 00	103 10 00	North Mongolia	Tariat-selenge	Depression		tuff breccia, porphyrite	Carboniferous(C3)	North Mongolia	tuff breccia, porphyrite			
82	Zaukhim gol	Metasomatic	Bulgan	49 14 00	104 14 00	North Mongolia	Orkhon-selenge	Uplift	granite, granodiorite	volcanogenic sedimentary rocks	Permian-Triassic(P2-T1)	North Mongolia	granite, granodiorite		Permian-Triassic(P2-T3)	
85	Aguin davaa	Hydrothermal	Bulgan	48 38 00	103 59 00	North Mongolia	Tariat-selenge	Depression	granite			North Mongolia	granite			
89	Mogoin gol? Megan gol?	Hydrothermal	Bulgan	49 10 00	103 45 00	North mongolia	Orkhon-selenge	Depression		volcanogenic sedimentary rocks	Permian(P)	North Mongolia	volcanogenic sedimentary rocks			
108	Bulagi	Metasomatic	Bulgan	49 43 00	103 00 00	North Mongolia	Tariat-selenge	Depression		trachyandesite, andesite porphyry, tuffaceous sandstone	Triassic-Lower Jurassic	North Mongolia	trachyandesite, andesite porphyry, tuffaceous sandstone	Silicification, Limonitization		
109	Bayanzurkh	Contact metamorphism	Bulgan	49 45 00	103 06 00	North Mongolia	Tariat-selenge	Depression	leucocratic granite	volcanic rocks	Upper Permian-Lower Triassic	North Mongolia	leucocratic granite			
113	Khyassa bulag	Hydrothermal	Arkhangai	48 20 00	101 06 00	Mongol-Ubur bi ykal	Khangai	Depression	granite			North Mongolia	granite			
114	Ider uul	Hydrothermal-metasomatic	Arkhangai	48 13 00	101 37 00	Mongol-Ubur bi ykal	Khangai	Uplift	granite			North Mongolia	granite			
115	Khuilen nuur	Hydrothermal-metasomatic	Arkhangai	48 06 00	101 56 00	Mongol-Ubur bi ykal	Khangai	Uplift	granite			North Mongolia	granite			
149	Dund gal	Sedimentary	Tub	48 12 00	104 26 00	Mongol-Ubur bi ykal	North Khentii	Uplift		sediment	Quaternary(QIV)	North Khentii	sediment			

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (1b/17)

No.	Deposit name	Deposit (2)										Previous survey					Remarks (surveyed occurrence No.)
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	Reference Report number					
22	Tamir gol	Lenticular body: 200-400m	magnetite	hematite	Fe-42%	Fe-57million ton	Prospecting work						2374, 2626, 3003	Outer of survey area			
23	lkh zagzag uul	Lenticular body: 65m x 11,6m	magnetite	hematite, limonite	Fe-62%	Fe-1million ton	Prospecting work						1438, 2083, 1814				
24	Erdeneiin ovoo (Central part)	Stockwork: 1350m x300m	chalcocite, chalcopyrite	malachite, azurite, covellite	Cu-0.41%, Mo- 0.016%	Cu-598790t; Mo- 21864t	Prospecting work(1988)										
33	Erdeneiin ovoo and SE(Oyul)	Stockwork: 4km x0.6km	chalcopyrite, pyrite, molybdenite	covellite, chalcocite	Cu-0.33-0.4%	Cu-1086800t	Prospecting work						1961, 3283, 1820, 1813, 3865, 4383	(41)			
34	Erdeneiin ovoo	Stockwork: 2,8km x1,3km	chalcopyrite, pyrite, covellite, bornite, etc.		Cu-0.9%	Cu-2825000t	Prospecting work						961, 1820, 1813, 1947, 1993, 4069, 4565, 2083, 3283	(40)			
81	Xhusheet gol	Fracture zone: 300m x50m	chalcopyrite	pyrite	Cu-		Geological mapping(1960)**	41 samples					1500	(3)			
82	Zaukhin gol	Stock. Dykes: 1,2km x3,5km	chalcopyrite, pyrite, molybdenite	galena, sphalerite	Cu-0.006-0.2%; Mo-0.003%		Prospecting work(1965)						1965, 3665	(39)			
85	Aguin davaa	Quartz vein:	malachite	hematite	Cu-		Geological mapping(1959)**						1438				
89	Mogoin gol	Altered zone: 1500m x1000m			Cu-0.03-0.07%		Prospecting work(1986)						3665	(37)			
108	Bulagt	Altered zone: 900m x400m			Cu-0.001-0.006%		Geological mapping(1979)**	434 samples		114m.cub			3156				
109	Bayanzhurkh	Altered zone: 3- 5sq.m			Cu-0.003-0.005%		Geological mapping(1979)**			465.4m.cub			3156				
113	Khyassaa bulag	Altered zone: 50m x0.5m	malachite	lazurite, pyrite	Cu-0.1%		Geological mapping(1980)**						3228				
114	Ider uul	Fracture zone: 750m x500m	malachite	scheelite, cassiterite	Cu-0.002-0.02%		Geological mapping(1980)**	47 samples		44igs			3228				
115	Khuiten nuur	Quartz vein: 100m x1.5m			Cu-0.001-0.005%; Ag-0.7g/t; Au- 0.2g/t		Geological mapping(1980)**			66igs			3228				
149	Dund galt	Bed:	gold		Au-sign		Prospecting work(1984)			2lincs			3719				

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (2a/17)

No.	Deposit name	Deposit type	Location			Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metalogenic province	Country rock	Alteration	Age of mineralization
150	Tsagaan galt	sedimentary	Tub	48 14 00	104 28 00	Mongol-Ubur ba ykal	Khenty	Uplift		sediment	Quaternary		North Khenty	sediment		
151	Dund namgan	Sedimentary	Tub	48 15 30	104 30 00	Mongol-Ubur ba ykal	Khenty	Uplift		sediment	Quaternary		North Khenty	sediment		
152	Baga namgan	Sedimentary	Tub	48 15 00	104 30 00	Mongol-Ubur ba ykal	Khenty	Uplift		sediment	Quaternary		North Khenty	sediment		
153	Baga khalaast	Sedimentary	Tub	48 17 00	104 31 00	Mongol-Ubur ba ykal	Khenty	Uplift		sediment	Quaternary		North Khenty	sediment		
156	Zaun khavchuu	Sedimentary	Tub	48 32 07	104 38 25	Mongol-Ubur ba ykal	North Khenty	Depression		clay, pebble	Quaternary(OIV)		North Khenty	clay, pebble		
165	Jasim buits	Metasomatic	Bulgan	48 47 00	103 26 00	North Mongolia	Tariat-selenge	Depression		acidic volcanic rocks	Permian(P1)		North Mongolia	acidic volcanic rocks		
166	Khukh chuluun uul	Hydrothermal	Bulgan	48 45 00	103 25 00	North Mongolia	Tariat-selenge	Depression	diortie				North Mongolia	diortie		
167	Zaun turuunii gol	Hydrothermal	Bulgan	48 53 00	103 36 00	North Mongolia	Tariat-selenge	Depression		andesite-basalt, tuff	Lower Permian		North Mongolia	andesite-basalt, tuff		
171	No5	Hydrothermal Au	Tub	48 21 00	104 32 00	North Mongolia	Khenty	Anticlinal	granite	sandstone	Vendian-Lower Cambrian		north Khenty	sandstone, granite		
172	No24	Hydrothermal	Tub	48 13 00	104 24 00	North Mongolia	North Khenty	Anticlinal		meta-sandstone	Vendian-Cambrian(V-E1)		North Khenty	meta-sandstone		
173	No22	Hydrothermal Au	Tub	48 14 00	104 27 00	North Mongolia	Khenty	Anticlinal		sandstone	Vendian-Lower Cambrian		North Khenty	sandstone		
174	No19	Hydrothermal Au	Tub	48 16 00	104 38 00	North Mongolia	Khenty	Anticlinal	granite	sandstone	Vendian-Cambrian(V-E1)		North Khenty	granite, sandstone		
181	Skarn	Metasomatic	Khubs gul	50 11 00	100 00 00	North Mongolia	Near Khubs gul	Sinclinal	granodiorite	limestone	Devonian(D)		North Mongolia	granodiorite		
188	Shar klundeec	Dynamic metamorphism	Bulgan	49 48 00	103 21 00	North Mongolia	Tariat-selenge	Sinclinal	granite	andesite porphyritic, tuff	Lower Permian		North Mongolia	andesite porphyritic, tuff		
195	Delger uul	Hydrothermal	Khubs gul	50 02 00	100 21 00	North Mongolia	Near Khubs gul	Sinclinal	granite		Permian(P1)			granite		

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

(2b/17)

No.	Deposit name	Deposit (2)				Previous survey				Reference Report number	Remarks (surveyed occurrence No.)		
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics			Trench and pit	Drilling
150	Tsagaan gait	Gold bearing bed: 0.2-1.4m	gold		Au-10- 916.0mg/m.cub		Prospecting work(1984)				2lines	3719	
151	Dund namgan	Gold bearing beds: 4.5km long	gold		Lower bed Au- 400-700mg/m.cub; upper bed Au- 316mg/m.cub		Prospecting work(1984)				2lines	3719	
152	Baga namgan	Gold bearing bed: 0.2-1.4m wide	gold		Lower bed Au- 2655mg/m.cub; Upper bed Au- 647mg/m.cub		Prospecting work(1984)				3lines	3719	
153	Baga khailaast	Gold bearing beds: Lower bed-1200m x1000m; Upper bed-3200m x40m	gold		Au-1500- 5000mg/m.cub	Au-1270 kg	Prospecting work(1984)				2lines	3719	
156	Zuun khavchuu	Bed: 0.8m	gold		Au-1172mg/m.cub		Prospecting work(1991)				123m	4676	
165	Jasin huuts	Altered zone: 2000m x500m			Cu-0.002-0.007%		Prospecting work(1981)*	320 samples			1028,9m.cub	3538	(34)
166	Khukh chuluun uul	Quartz vein: 13m x0.15m			Cu-0.003-0.009%		Geological mapping(1971)**, prospecting work(1981)*				131.8m.cub	3538	
167	Zuun uruunii gol	Quartz vein: 1.5m x0.2m			Cu-		Geological mapping(1971)**					3538	
171	No5	Quartz vein:	gold		Au-0.2g/t		Geological mapping(1981)*					3600	
172	No24	Quartz vein: 0.6m			Au-0.6g/t; Ag- 1.7g/t		Geological mapping(1981)*					3600	(1)
173	No22	Quartz vein: 1-2m wide	gold		Au-0.2g/t		Geological mapping(1981)*					3600	
174	No19	Quartz vein: 50m x1m			Au-0.2g/t		geological mapping(1981)*					3600	
181	Scarn	Skarn: 1.5-8m			Cu-0.015-1.0%; Ag-5-10.0g/t		Geological mapping(1982)*				59.6m.cub	3649	(19)
188	Shar khundeec	Altered zone			Cu-0.3%		Geological mapping(1979)**					3832	
195	Deiget uul	Quartz vein: 3m x0.1m			Au-3*10(-7)g/t		Geological mapping(1985)*				182.9m.cub	3976	(17)

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location				Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenetic province	Country rock	Alteration	Age of mineralization	
232	Occurrence-65	Hydrothermal	Bulgan	50 06 00	102 27 00	North Mongolia	Tariat-selenge	Dipression	diorite			Lower Paleozoic			diorite		
233	Sukhait	Contact metamorphism	Bulgan	50 15 00	104 23 00	North Mongolia	Tariat-selenge	Dipression	granite	carbonic, terrigenous sediments	Lower-Middle Cambrian	Jurassic	North Mongolia	granite			
235	Taibagai-76	Hydrothermal	Selenge	50 14 00	104 23 00	North Mongolia	Tariat-selenge	Dipression	granite, granodiorite			Lower Paleozoic, Jurassic		granite, granodiorite			
239	Teshig-1	Contact metamorphism	Bulgan	49 59 00	102 29 00	North Mongolia	Tariat-selenge	Dipression	granite	volcanic rocks, sandstone, limestone	Vendian	Upper Permian-Lower Triassic		granite			
240	Ar shivert	Hydrothermal	Bulgan	49 29 00	103 05 00	North Mongolia	Tariat-selenge	Dipression		andesite porphyrite, plagiophyre, trachyte porphyryuff	Permian		North Mongolia	andesite porphyrite, plagiophyre, tuff, trachyte porphyry			
257	Bulagt	Hydrothermal	Bulgan	50 16 00	104 22 00	North Mongolia	Tariat-selenge	Dipression	granite			Jurassic		granite			
301	Ar khundec	Sedimentary	Tub	48 30 50	104 38 10	Mongol-Ubur ba ykal	North Khentiy	Dipression		clay, pebble	Quaternary(QIV)		North Khentiy	clay, pebble			
302	The mouth of Tol river	Sedimentary	Tub	48 31 00	104 32 00	Mongol-Ubur ba ykal	North Khentiy	Dipression		sandstone, clay, pebble	Quaternary(QI-IV)		North Khentiy	sand, clay, pebble			
306	Jaiga-40	Sedimentary	Tub	48 15 00	104 19 50	Mongol-Ubur ba ykal	North Khentiy	Dipression		clay, pebble	Quaternary(QIV)		North Khentiy	clay, pebble			
307	Ubur narim	Sedimentary	Tub	48 07 00	104 21 00	Mongol-Ubur ba ykal	North Khentiy	Uplift		clay, pebble	Quaternary(QIV)		North Khentiy	clay, pebble			
309	Nogoon usni khalast	Sedimentary	Tub	48 16 00	104 21 00	Mongol-Ubur ba ykal	North Khentiy	Dipression		clay, pebble	Quaternary(QIV)		North Khentiy	clay, pebble			
310	Jaiga-48	Sedimentary	Tub	48 06 20	104 21 00	Mongol-Ubur ba ykal	North Khentiy	Uplift		sandstone, clay, pebble	Quaternary(QIV)		North Khentiy	sand, clay, pebble			
311	Uliin an	Sedimentary	Tub	48 11 00	104 21 30	Mongol-Ubur ba ykal	North Khentiy	Uplift		sand, clay, pebble	Quaternary(QIII)		North Khentiy	sand, clay, pebble			
313	Tsagaan chuluut	Sedimentary	Tub	48 10 20	104 36 10	Mongol-Ubur ba ykal	North Khentiy	Uplift		sandstone, clay, pebble	Quaternary(QI-III)		North Khentiy	sand, clay, pebble			
314	Ongotsot	Sedimentary	Tub	48 03 00	104 37 30	Mongol-Ubur ba ykal	North Khentiy	Dipression		sandstone, clay, pebble	Neocene, Quaternary(N1-2, QI-II)		North Khentiy	sand, clay, pebble			
315	Oortsog	Sedimentary	Tub	48 03 20	104 36 30	Mongol-Ubur ba ykal	North Khentiy	Uplift		sandstone, clay, pebble	Neocene, Quaternary(N1-2, QI-III)		North Khentiy	sand, clay, pebble			

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

(3b/17)

No.	Deposit name	Deposit (2)										Previous survey				Reference Report number	Remarks (surveyed occurrence No.)
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysists	Trench and pit	Drilling						
232	Occurrence-65	Quartz vein: 300m x0.8m	gold	malachite, turquoise, lazurite	Au-0.3-4.9g/t; Cu-0.5-1.1%		Prospecting work(1984)							4041			
233	Sukhait	Cretacized zone: 300m x80m			Mo-0.09-1.28%		Prospecting work(1941, 1985)		7digs(1941)					4041			
235	Tarbagatai-76	Quartz vein: 700m x2.1m	gold		Au-0.02-10g/t; Ag-2800g/t		Prospecting work(1985)		8digs					4041			
239	Teshig-1	Skarn: 1500m x30m			Cu-0.3%; Au-3.39g/t		Prospecting work(1985)							4041			
240	Ar shivert	Fracture zone: 3000m x1000m			Mo-0.0003-0.006%		Prospecting work(1985)							4041			
257	Bulagi	Stockwork: 350m	scheelite	pyrite, molybdenite, hubnerite	W; Mo-		Prospecting work(1985)							4041			
301	Av khundee	Bed:	gold		Au-85-225mg/m.cub		Prospecting work(1991)						70m	4676			
302	The mouth of Tol river	Bed: 4610m x0.67m	gold		Au-445-500mg/m.cub		Prospecting work(1986)	Au-1679,1kg					4588,4m	4676			
306	Jaiga-40	Bed: 1.8m	gold		Au-173mg/m.cub		Prospecting work(1988)						108,8m	4707			
307	Ubur narin	Bed: 0,4m wide	gold		Au-187-9099mg/m.cub		Prospecting work(1988)						183,6m	4707			
309	Nogoon usnii khaast	Bed: 0,4-1,2m	gold		Au-124-1326mg/m.cub		Prospecting work(1987)						766,6m	4707			
310	Jaiga-48	Bed: 0,4-1,6m	gold		Au-21-871mg/m.cub		Prospecting work(1989)						304,2m	4707			
311	Ulim am	Bed: 0,4-2,0m	gold		Au-134-706mg/m.cub		Prospecting work(1989)						709,6m	4707			
313	Tsagaan chuluut	Bed: 0,4-2,0m	gold		Au-202-933mg/m.cub		Prospecting work(1990)						923,6m	4707			
314	Ongotsol	Bed: 0,8-1,6m	gold		Au-411-562mg/m.cub		Prospecting work(1990)						467,6m	4707			
315	Oontseg	Bed: 0,4-2,0m	gold		Au-8-58mg/m.cub		Prospecting work(1990)						450,8m	4707			

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (4a/17)

No.	Deposit name	Deposit type	Location			Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metalogenic province	Country rock	Alteration	Age of mineralization
316	Jalga-46	Sedimentary	Tub	48 05 00	104 22 20	Mongol-Ubur ba ykal	North Khentiy	Dipression		clay, pebble	Neocene, Quaternary(N2, QIV)		North Khentiy	clay, pebble		
317	Jalga-47	Sedimentary	Tub	48 05 00	104 20 50	Mongol-Ubur ba ykal	North Khentiy	Dipression		sandstone, clay, pebble	Quaternary(QIV)		North Khentiy	sand, clay, pebble		
342	Satrin khundec	Hydrothermal	Arkhangai	48 41 00	102 08 00	North Mongolia	Tariat-selenge	Dipression	granite, syenite porphyry	volcanic rocks	Permian(P1)	Permian-Triassic(P2-T1), Jurassic(J2-3)	North Mongolia	granitoid, syenite porphyry		
343	Amii bulag	Hydrothermal-metasomatic	Khubsgul	49 15 00	101 34 00	North Mongolia	Tariat-selenge	Dipression	granite	green shale	Lower Riphean	Lower-Middle Devonian	North Mongolia	granite		
344	Zandagin davaa	Contact metamorphism	Bulgan	48 42 00	102 26 00	North Mongolia	Orkhon-selenge	Dipression	granite	carbonatized rocks	Lower Proterozoic	Lower Paleozoic	North Mongolia	granite		
358	Baga msh uul	Magmatic, hydrothermal	Bulgan	48 44 00	103 48 00	North Mongolia	Tariat-selenge	Dipression		andesite porphyry	Lower Permian		North Mongolia	andesite porphyry	Epitotization, Chloritization	
359	Mej uul	Hydrothermal	Bulgan	48 49 00	103 41 00	North Mongolia	Tariat-selenge	Dipression		andesite porphyry	Lower Permian		North Mongolia	andesite porphyry		
360	Davaa	Hydrothermal	Bulgan	49 16 00	103 56 00	North Mongolia	Tariat-selenge	Dipression	granite	volcanic rocks	Permian	Upper Permian-Lower Triassic	North Mongolia	granite		
363	Bayan gol	Metasomatic	Arkhangai	48 45 30	100 40 20	North Mongolia	Tariat-selenge	Dipression		volcanic rocks	Middle Devonian		North Mongolia	volcanic rocks		
369	Baruun khujirt	Hydrothermal	Bulgan	50 18 00	104 25 00	North Mongolia	Tariat-selenge	Dipression	granite			Lower paleozoic	North Mongolia	granite		
370	Ereen	Contact metamorphism	Bulgan	50 06 00	102 26 00	North Mongolia	Tariat-selenge	Dipression	granite			Lower Paleozoic, Permian-Triassic(P2-T1)	North Mongolia	granite		
402	Urgen khajuu	Hydrothermal-metasomatic	Bulgan	48 03 00	102 56 00	North Mongolia	Tariat-selenge	Dipression		trachyandesite-basalt	Upper Jurassic-Lower Triassic			trachyandesite-basalt		
404	Occurrence-9	Hydrothermal	Arkhangai	48 07 00	102 38 00	North Mongolia	Tariat-selenge	Dipression	granite	sandstone	Carboniferous (C1-2)	Mesozoic(MZ1)		Granite		

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (4b/17)

No.	Deposit name	Deposit (2)		Previous survey					Reference	Remarks (surveyed occurrence No.)		
		Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics			Trench and pit	Drilling
316	Jalga-46	gold		Au-70.604mg/m.cub		Prospecting work(1989)				388m	4707	
317	Jalga-47	gold		Au-310mg/m.cub		Prospecting work(1989)				188.8m	4707	
342	Sarim khundee	chalcopryrite	malachite, lazurite	Cu-0.001-0.002%		Geological mapping(1972)**					2043	(7)
343	Ammi bulag			Cu-0.02-0.04%, Mo-0.15%, Ag-0.02g/t; W-5.0g/t		Geological mapping(1972)**	1674 samples		484m.cub		2043	
344	Zaidangim davaa			Cu-0.01-0.02%		Geological mapping(1972)**		173m.cub			2043	
358	Baga mich uul			Cu-		prospecting work(1973)*					2221	
359	Mej uul			Cu-0.0008%		Prospecting work(1973)*					2221	
360	Davaa			Cu-0.003-0.01%		prospecting work(1973)*					2221, 3832	
363	Bayan gol			Cu-0.05-0.09%		Geological mapping(1974)**		222.7m.cub			2283	
369	Baruun khujirt	Quartz vein: 14m x0.5m; Alteration zone: 1700m x2m		W-0.02-1.0%		Acro-geophysical mapping(1983)**					2432	
370	Ereen	Fracture zone: 700m x20m	chalcocite, covellite, molybdenite	Cu-3.0%; Au-1g/t; Ag-100-200g/t		Acro-geophysical mapping(1983)**					2432	
402	Urgen khajuu	Altered zone: 34000m x500m		Sr-0.03-0.7%; La-0.0007-0.01%; Cu-0.002-0.03%; Ag-0.03-0.22g/t		Acro-geophysical mapping(1988)*	1937 samples	Magnetics, Electrics, Radiometrics			4396	
404	Occurrence-9	Quartz vein: 100m x3m		Ag-30g/t		Acro-geophysical mapping(1988)*					4396	(5)

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metalogenic province	Country rock	Alteration	Age of mineralization
405	Mogod	Hydrothermal-metasomatic	Bulgan	48 17 00	103 03 00	North Mongolia	Tariat-selenge	Dipression		andesite-basalt, trachyandesitic-basalt	Permian(P2), Triassic-Jurassic(T3-J1)			andesite-basalt, trachyandesitic-basalt		
406	Kholbov ovoo	Contact metamorphism	Arkhangai	48 38 00	102 07 00	North Mongolia	Tariat-selenge	Dipression	granite, diorite	andesite, dacite	Permian(P2)	North Mongolia	Devonian(D1-2)	North Mongolia	granite, diorite	
407	Tsagaan gozgor	Hydrothermal-metasomatic	Arkhangai	48 39 00	102 12 00	North Mongolia	Tariat-selenge	Dipression	granite, granodiorite			North Mongolia	Permian-Triassic(P2-T1)	North Mongolia	granite, granodiorite	
408	Shar khad	Hydrothermal	Bulgan	48 49 00	102 34 00	North Mongolia	Tariat-selenge	Dipression		rhyolite, volcanogenic sedimentary rocks	Devonian	North Mongolia		North Mongolia	rhyolite, volcanogenic sedimentary rock	
410	North Oortsog	Hydrothermal-metasomatic	Arkhangai	48 48 00	102 04 00	North Mongolia	Tariat-selenge	Dipression		tuff-chonglomerat, tuff-sandstone, tuff-aleurolite	Permian	North Mongolia		North Mongolia	tuffaceous conglomerate, tuffaceous sandstone, tuffaceous aleurolite	Silicification?
411	Barchagar	Hydrothermal-metasomatic	Bulgan	48 36 00	102 39 00	North Mongolia	Tariat-selenge	Dipression	granite, granodiorite			North Mongolia	Lower-Middle Devonian	North Mongolia	granite, granodiorite	
416	Tsookhor morit	Hydrothermal-metasomatic	Bulgan	48 45 00	103 16 00	North Mongolia	Tariat-selenge	Dipression	granite, syenite porphyry			North Mongolia	Permian-Triassic(P2-T1)		granite, syenite porphyry	
417	Khar uul	Hydrothermal	Bulgan	48 42 00	103 19 00	North Mongolia	Tariat-selenge	Dipression		volcanogenic sedimentary rocks	Triassic-Jurassic(T3-J1)	North Mongolia		North Mongolia	volcanogenic sedimentary rocks	
418	Nomgon	Dynamic metamorphism	Bulgan	48 49 00	102 27 00	North Mongolia	Tariat-selenge	Dipression	syenite-diorite			North Mongolia	Permian-Triassic(P2-T1)	North Mongolia	syenite-diorite	
419	Erecen Ikber	Dynamic metamorphism	Bulgan	48 49 00	102 35 00	North Mongolia	Tariat-selenge	Dipression		acidic volcanic rocks	Devonian(D2)	North Mongolia		North Mongolia	acidic volcanic rocks	
420	Undrakh	Hydrothermal-metasomatic	Bulgan	48 42 00	102 46 00	North Mongolia	Tariat-selenge	Dipression	diorite	subvolcanic rocks		North Mongolia	Paleozoic, Permian-Triassic(PZ1, P2-T1)	North Mongolia	diorite, subvolcanic rocks	
421	Aguit	Hydrothermal-metasomatic	Bulgan	48 47 00	102 57 00	North Mongolia	Tariat-selenge	Dipression	granite	acidic volcanic rocks	Devonian(D2)	North Mongolia	Permian-Triassic(P2-T1)	North Mongolia	acidic volcanic rocks	
422	Geseg	Metasomatic	Bulgan	48 51 00	102 44 00	North Mongolia	Tariat-selenge	Dipression	granite	volcanogenic sedimentary rocks	Lower Permian	North Mongolia	Middle Jurassic	North Mongolia	granite	

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (5b/17)

No.	Deposit name	Deposit (2)					Previous survey					Reference Report number	Remarks (surveyed occurrence No.)
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling		
405	Mogod	Altered zone: 3-10m			Cu-0.007%; Zr-0.03%; Sr-0.2%		Aero-geophysical mapping(1988)*	1296 samples	Magnetics, Radiometrics			4396	(9)
406	Kholboo ovoo	Skarn			Cu-0.03-0.05%		Aero-geophysical mapping(1988)*	1554 samples	Magnetics, Electrics, Radiometrics			4396	(9)
407	Tsagaan gozgor	Dykes: 1-5m wide			Cu-0.01-1%; Ag-0.1-50g/t		Aero-geophysical mapping(1988)*	461 samples	Magnetics, Electrics, Radiometrics	176m.cub		4396	(6)
408	Shar khad	Altered zone			Mo-0.0007-0.07%; Cu-0.001-0.002%		Aero-geophysical mapping(1988)*	732 samples	Magnetics, Electrics, Radiometrics			4396	
410	North Oortsog	Altered zone: 900m x250m	molybdenite		Cu-0.003%; Mo-0.001%; Ag-1.0 g/t		Aero-geophysical mapping(1988)*	449 samples	Magnetics, electrics			4396	
411	Barchgar	Altered zone: 1500m x100m			Cu-		Geophysical mapping(1988)*	771 samples	Magnetics, Spectrometrics			4396	
416	Tsookhor morit	Quartz vein: 700m x2m			Au-3-10g/t; Ag-20-500g/t; Cu-0.02-0.3%		Geological mapping(1986)*	3160 samples	Magnetics, Electrics	278,9m.cub		4403	(33)
417	Khar uul	Diorite dykes: 200-300m	chalcopryite	bornite, gold	Cu-0.2-0.5%; Au-215-300mg/t		Geological mapping(1986)*	1000 samples	Magnetics, Electrics			4403	(35)
418	Nomgon	Altered zone			Cu-0.001%		Geological mapping(1986)*					4403	(28)
419	Ereen ikher	Altered zone: 200m	molybdenite		Cu-0.007%; Ag-0.5g/t		Geological mapping(1986)*					4403	(26)
420	Undrakh	Vein(phenocrystal ?): 300m x150m			Cu-0.5-0.7%; Ag-1-5g/t		Geological mapping(1986)*		Magnetics, Electrics	176,6m.cub	100m	4403	(32)
421	Agui	Altered zone: 1000m x15m	chalcopryite	malachite, lazurite	Cu-0.001-0.005%; Au-0.1g/t		Geological mapping(1986)*	650 samples	Magnetics, Electrics			4403	(31)
422	Geseg	Fracture zone:			Mo-0.0001-0.0003%; Cu-0.003-0.01%		Geological mapping(1986)*		Electrics	230,9m.cub	206,6m	4403	

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (6a/17)

No.	Deposit name	Deposit type	Location			Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenic province	Country rock	Alteration	Age of mineralization
423	Zairan	Hydrothermal-metasomatic	Bulgan	48 49 00	102 42 00	North Mongolia	Tariat-selenge	Dipression	granite, diorite	conglomerate, andesite porphyry, subvolcanic rocks	Permian, Jurassic(P1, J2)	Permian-Triassic(P1, T1)	North Mongolia	granite, diorite, subvolcanic rocks		
424	Burged khayar	Hydrothermal-metasomatic	Bulgan	48 52 00	102 49 00	North Mongolia	Tariat-selenge	Dipression	granite, diorite	conglomerate, basalt, andesite porphyry	Permian, Jurassic, Quaternary(P1, J2, Q1)	Permian-Triassic(P1, T1)	North Mongolia	granite, diorite		
427	Nergui (III-4-29)	Hydrothermal Au	Tub	48 24 00	104 44 00	Mongol-Ubur ba ykal	North Khentiy	Anticlinal	granite		Middle Paleozoic		North Khentiy	granite		
428	Nergui (III-4-27)	Hydrothermal Au	Tub	48 25 00	104 44 00	Mongol-Ubur ba ykal	North Khentiy	Anticlinal	granite		Middle Paleozoic		North Khentiy	granite		
430	Berkh	Hydrothermal Au	Tub	48 33 00	104 37 00	North Mongolia	Tariat-selenge	Dipression	diorite, granodiorite		Middle-Upper Ordovician		North Khentiy	diorite, granodiorite		
461	Khujim gol	Hydrothermal-metasomatic	Bulgan	48 41 00	102 12 00	North Mongolia	Tariat-selenge	Dipression	granitoid			Permian-Triassic(P1, T1)	North Mongolia	granitoid		
462	Oshigin uul	Metasomatic	Arkhangai	48 44 00	102 04 00	North Mongolia	Tariat-selenge	Dipression	granite			Upper Permian-Lower Triassic		granite		
463	Mogoin gol	Magmatic	Arkhangai	48 45 00	102 04 00	North Mongolia	Tariat-selenge	Dipression	granitoid			Permian-Triassic(P1, T1)	North Mongolia	granitoid		
612	Naran	Metasomatic	Selenge	49 15 00	104 43 00	North Mongolia	Tariat-selenge	Dipression	diorite, granodiorite, gabbro-diorite, microdiorite			Upper Permian-Lower Triassic	North Mongolia	diorite, granodiorite, gabbro-diorite, microdiorite		
613	Myangan Iant	Metasomatic	Selenge	49 14 00	104 48 00	North Mongolia	Tariat-selenge	Dipression	diorite, granite			Upper Permian-Lower Triassic	North Mongolia	diorite, granite		
679	Uizir ovoo	Skarn-metasomatic	Bulgan	48 16 00	104 10 00	Mongol-Ubur ba ykal	North Khentiy	Uplift	granite	metamorphic rocks	Proterozoic-Cambrian(PR-E1)	Triassic(T1-2)	North Khentiy	Granite		
680	Oyuut Khonkhor	Hydrothermal	Bulgan	48 10 00	102 57 00	North Mongolia	Tariat-selenge	Dipression	granite	andesite, dacite, rhyolite, tuff	Triassic-Jurassic(T2-J)		Orkhon-Selenge ore zone	andesite, dacite, rhyolite, tuff		
858	Vein-422 (Ulc ore zone)	Hydrothermal	Tub	48 06 21	104 22 20	Mongol-Ubur ba ykal	North Khentiy	Fault		green shale	Cambrian-Ordovician(E2-O1)		North Khentiy	green shale		Mesozoic(MZ1)
859	Vein No41	Hydrothermal Au	Tub	48 05 55	104 30 10	Mongol-Ubur ba ykal	North Khentiy	Fault		green schist, sandstone, siltstone	Middle Cambrian-Lower Ordovician	Ordovician	North Khentiy	green schist, sandstone, siltstone		Lower Mesozoic
860	Vein-177 (Ulc ore zone)	Hydrothermal	Tub	48 06 15	104 22 24	Mongol-Ubur ba ykal	North Khentiy	Fault		green shale, sandstone, aleurolite	Cambrian-Ordovician(E2-O1)		North Khentiy	green shale, sandstone, aleurolite		Mesozoic(MZ1)

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (6b/17)

No.	Deposit name	Deposit (2)				Previous survey				Reference	Remarks (surveyed occurrence No.)	
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics			Trench and pit
423	Zairan	Vein:	chalcopryrite	turquois, lazurite, malachite, bornite	Cu-0.1-3%		Geological mapping(1986)*	Electrics	495.8m.cub	253.7m	4403	(27)
424	Burged khyar	Stock: 20m x600m			Cu-0.36%; Mo-0.02%	Cu-163000; Mo-1500t	Geological mapping(1986)*	Magnetics, Electrics	530m.cub	319.6m	4403	(29)
427	Nergui (III-4-29)	Quartz vein: 1100m x1m			Au-0.03-4g/t	Au-1.0t	Geological mapping(1986)*				4408	
428	Nergui (III-4-27)	Quartz vein: 1100m x1m			Au-0.7-4g/t	Au-1.0t	Geological mapping(1986)*		14m(1986)		4408	
430	Berkh	Quartz vein: 240m x25m			Au-7.5g/t		Geological mapping(1986)*	1600 samples(1986)	252m.cub(1986)		4408	
461	Khujin gol	Greenized zone: 350m x100m	tin stone		Sn-0.03%; Mo-0.0006%		Prospecting work(1977)	213 samples	56m.cub		2924	
462	Oshgim uul	Greenized zone: 250m x50m			Pb-0.03%; Zr-0.06%; Mo-0.02%		Prospecting work(1977)	419 samples	90m.cub		2924	
463	Mogoin gol	Diorite dyke: 700m x50m			Cu-0.003-0.01%		Prospecting work(1977)	213 samples	21m.cub	45m	2924	(8)
612	Naran	Altered zone			Cu-0.01-0.05%		Geological mapping(1988)*	276 samples	828.2m.cub	525.6m	4420	
613	Myangan Iant	Altered zone	chalcopryrite	molybdenite, arsenopyrite, galena	Cu		Geological mapping(1988)*				4420	
679	Ulzit ovoo	Lenticular skarn	sphalerite	chalcopryrite, magnetite, gold	Au-0.2g/t; Cu-0.07%	Cu-45000t	Prospecting work(1987)*	566 samples	104m.cub	2100m	4084	(2)
680	Oyuit Khonkhor	Metasomatic?	pyrite, chalcopryrite, malachite		Cu-0.01%; Ag-0.2g/t; Au-4.4g/t		Geological mapping(1977, 1987)*, **	4993 samples(1987)	457.8m(1977); 265.3m(1977)	525m(1977); 516.3(1987)	2765, 4084	(4)
858	Vein-422 (Ule ore zone)	Quartz vein: 400m x1.4m			Au-9.25g/t	Au-3.8t	Prospecting work(1993)	Magnetics, Electrics	5digs	214.9m	4785	(1)
859	Vein No41	Quartz vein: 800m x1.2m		pyrite?(py), chalcopryite? (cc)	Au-11.06g/t	Au-2.0t	Geological mapping(1991)	Electrics, Magnetics (1992)	6digs(1991)	174m(1992)	4785	
860	Vein-177 (Ule ore zone)	Quartz vein: 100m x0.29m			Au-0.2g/t		Prospecting work(1993)	Magnetics, Electrics	4digs	216.3m	4785	(1)

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

(7a/17)

No.	Deposit name	Deposit type	Location			Geology										Deposit (1)		
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metabogenic province	Country rock	Alteration	Age of mineralization		
874	Vein-146 (Bichigt zone)	Hydrothermal	Tub	48 06 30	104 19 25	Mongol-Ubur ba ykal	North Khentiy	Fault	granite				Ordovician(O2-3)	North Khentiy	Granite		Mesozoic(MZ1)	
881	Vein-148 (Ulaan enger zone)	Hydrothermal	Tub	48 06 20	104 20 15	Mongol-Ubur ba ykal	North Khentiy	Fault	granite	shale, sandstone	Cambrian-Ordovician(E2-O1)		Ordovician(O2-3)	North Khentiy	granite		Mesozoic(MZ1)	
886	Vein-163 (Ulaan enger zone)	Hydrothermal	Tub	48 06 12	104 19 55	Mongol-Ubur ba ykal	North Khentiy	Fault	granite				Ordovician(O2-3)	North Khentiy	granite		Mesozoic(MZ1)	
897	Vein-164 (Ulaan enger zone)	Hydrothermal	Tub	48 06 14	104 20 08	Mongol-Ubur ba ykal	North Khentiy	Fault	leucocratic granite				Ordovician(O2-3)	North Khentiy	leucocratic granite		Mesozoic(MZ1)	
911	Ore bearing dyke series zone	Hydrothermal	Tub	48 06 45	104 24 00	Mongol-Ubur ba ykal	North Khentiy	Fault		meta-shale, metasomatic rocks?	Cambrian-Ordovician(E2-O1)			North Khentiy	meta-shale, metasomatic rocks?		Mesozoic(MZ1)	
935	Tsagaan chuluut zone	Hydrothermal	Tub	48 05 00	104 26 00	Mongol-Ubur ba ykal	North Khentiy	Fault		meta-shale, meta-sandstone	Cambrian-Ordovician(E2-O1)			North Khentiy	meta-shale, sandstone		Mesozoic(MZ1)	
1435	Ncngui-2	Hydrothermal	Khubsugul	50 33 00	100 13 00	North Mongolia	Near Khubsugul	Dipression		acidic volcanic rocks	Middle Cambrian				acidic volcanic rocks			
1436	Ust gol	Hydrothermal	Khubsugul	50 28 00	100 05 00	North Mongolia	Near Khubsugul	Dipression	microsyenite porphyry	limestone	Lower Cambrian		Jurassic		microsyenite porphyry			
1439	Eglin gol	Metasomatic	Khubsugul	50 23 00	100 12 00	North Mongolia	Near Khubsugul	Dipression	granodiorite	limestone	Lower Cambrian		Lower-Middle Devonian		granodiorite, limestone			
1439	Aduun gol	Hydrothermal	Khubsugul	50 19 00	100 13 00	North Mongolia	Near Khubsugul	Dipression	syenite porphyry	sandstone	Middle Cambrian		Jurassic	Khubsugul	sandstone		Middle Cambrian	
1440	Yarkhis gol	Hydrothermal	Khubsugul	50 17 00	100 23 00	North Mongolia	Near Khubsugul	Dipression	syenite porphyry				Jurassic	Khubsugul	syenite porphyry		Jurassic	
1442	Quartz	Hydrothermal	Khubsugul	50 14 00	100 17 00	North Mongolia	Near Khubsugul	Dipression		alcuroilite, shale, sandstone	R3				alcuroilite, shale, sandstone		Riphean(R3)	

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

(7b/17)

No.	Deposit name	Deposit (2)										Previous survey				Remarks (surveyed occurrence No.)
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	Report number				
874	Vein-146 (Bichigt zone)	Quartz vein: 300m x1m			Au-0.1-1.4, 61g/t	Prospecting work(1993)			7digs	110m	4785	(1)				
881	Vein-148 (Ulaan enger zone)	Quartz vein: 1000m x11,46m			Au-0.5-6, 0g/t	Geological mapping(1991)			4digs(1991, 1992)	291m(1993)	4785	(1)				
886	Vein-163 (Ulaan enger zone)	Quartz vein: 60m x0.3m			Au-2, 43g/t	Geological mapping(1991)					4785	(1)				
897	Vein-164 (Ulaan enger zone)	Quartz vein: 20m x0.5m			Au-20g/t, Ag-30g/t	Geological mapping(1991)					4785	(1)				
911	Ore bearing dyke series zone	Quartz vein: 1000m x2m			Au-0.02-0.5g/t	Geological mapping(1991)			13digs		4785	(1)				
935	Tsagaan chuluut zone	Quartz vein: 500m x0.57m			Au-0, 5g/t	Geological mapping(1991)			12digs		4785	(1)				
1435	Nergui-2	Quartz vein: 60m x0.5m	galena	limonite, sphalerite, sericite	Pb-0.08-0.1%	Geological mapping(1966)**					1725					
1436	Usai gol	Syenite porphyry dyke: 600m x3,0m		cerussite, galena, monazite, fluorite, zircon, pyrite, titanite	Yb-0.01%; Ba-0.02%; Be-0.01%; Sr-0.04%; Ga-0.01%; Y-0.05%; Ce-0.3%; La-0.2%; Nb-0.006%	Geological mapping(1966)**			8m.cub		1725					
1437	Egin gol	Altered zone: 6m x1.5m	cyrtolite	fluorite, limonite, magnetite, ilmenite	REE, Zn-0.003%; La-0.01%; Sr-0.09%; Y-0.003%; Ba-0.08%; Pb-0.008%	Geological mapping(1966)**			19,43m.cub		1725					
1439	Adnuu gol	Syenite porphyry dyke: 80m x2,5m	cyrtolite	apatite, titanite, zircon, ilmenite	La-0.1%; Nb-0.006%; Sr-0.02%; Y-0.02%; Ga-0.008%	Geological mapping(1966)**					1725					
1440	Yarkhis gol	Stock: 150m x150m			Nb-0.01%; La-0.002%; Ce-0.55; Y-0.05%; Ga-0.002%	Geological mapping(1966)**					1725					
1442	Quartz	Quartz vein: 50m x1,5m	gold	silver	Au-7, 6g/t; Ag-0,4-3,2g/t	Geological mapping(1982)*			105m.cub		3649	(18)				

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (8a/17)

No.	Deposit name	Deposit type	Location			Geology					Deposit (1)					
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metageogenic province	Country rock	Alteration	Age of mineralization
1449	Tsagaan bargas	Magmatic	Khubsugul	49 56 00	100 21 00	North Mongolia	Near Khubsugul	Dipression		serpentine, carbonate	Paleozoic(P22)			serpentine, carbonite		Paleozoic(P22)
1488	Egjin gol	Hydrothermal	Khubsugul	49 56 00	100 23 00	North Mongolia	Near Khubsugul	Dipression		serpentine	Paleozoic(P21)		North Mongolia	serpentine	Carbonitization	Paleozoic(P21)
1491	Allgana gol	Hydrothermal	Khubsugul	49 51 00	100 25 00	North Mongolia	Near Khubsugul	Dipression	leucocratic granite, granite	basalt	Upper Paleogene-Lower Quaternary	Permian, Jurassic(P1, J3)	North Mongolia	leucocratic granite, granite	Silicification	Jurassic(J3)
1492	Khan jargalan ul	Metasomatic	Khubsugul	49 02 00	100 00 00	North Mongolia	Near Khubsugul	Dipression	granite, granosyenite, syenite	limestone, sandstone, conglomerate	Lower-Upper Cambrian	Lower Triassic	North Mongolia	granite, granosyenite, syenite		
1493	Alag tolgoi	Metasomatic	Khubsugul	49 40 00	100 45 00	North Mongolia	Zed	Dipression	Granite			Middle Devonian, Jurassic	North Mongolia	Granite		
1494	Donkhor bulag	Metasomatic	Khubsugul	49 22 00	100 10 00	North Mongolia	Ider	Dipression		trachyvolite porphyry, acidic tuff	Permian(P1)		North Mongolia	acid tuff, trachyvolite porphyry	Silicification, Kaolinization, Pyritization	
1495	Nergui	Hydrothermal	Khubsugul	49 22 00	100 03 00	North Mongolia	Near Khubsugul	Dipression		acidic volcanic rocks, tuff	Upper Permian			acidic volcanic rocks, tuff		
1500	Nergui	Metasomatic	Khubsugul	49 47 00	101 52 00	North Mongolia	Zed	Dipression	granite	limestone	Lower-Middle Cambrian	Lower-Middle Cambrian	North Mongolia	granite, limestone		
1525	Khonzovi gol	Hydrothermal	Khubsugul	51 15 00	100 12 00	North Mongolia	Near Khubsugul	Dipression		meta-sandstone, schist	Upper Proterozoic		North Mongolia	meta-sandstone, schist		
1529	Nergui (No74)	Metamorphogenic	Khubsugul	51 03 00	100 08 00	North Mongolia	Tuba-mongol	Uplift		crystalline shale	Upper Proterozoic			crystalline shale		
1530	Saikhan gol	Sedimentary	Khubsugul	50 52 00	100 08 00	North Mongolia	Near Khubsugul	Dipression		limestone	Lower Cambrian		North Mongolia	limestone		
1531	Baga tsagaan gol	Sedimentary	Khubsugul	50 51 00	100 04 00	North Mongolia	Near Khubsugul	Dipression		limestone, dolomite	Lower Cambrian		North Mongolia	limestone, dolomite		
1567	Khurilt gol	Hydrothermal	Khubsugul	50 39 00	100 46 00	North Mongolia	Near Khubsugul	Dipression	diorite	crystalline shale		Paleozoic(P21)		diorite, crystalline shale		
1568	Ult gol	Hydrothermal	Khubsugul	50 36 00	100 02 00	North Mongolia	Near Khubsugul	Dipression		limestone	Vendian		North Mongolia	limestone		
1581	Ubur teslin gol	Hydrothermal	Khubsugul	49 18 00	100 41 00	North Mongolia	Zed	Dipression	granite			Lower-Middle Devonian		granite		
1583	Ikh khujirtin khurec	Hydrothermal	Khubsugul	48 43 00	100 18 00	North Mongolia	Ider	Uplift	granodiorite, syenite, diorite			Lower-Middle Devonian	North Mongolia	granodiorite, syenite, diorite		

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)				Previous survey					Reference	Remarks (surveyed occurrence No.)	
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit			Drilling
1449	Tsagaan burgas	Metasomatic vein: 1200m x500m	(tourite)	fluorite	Ni-0,3-0,6%; Cr-0,4-1%		Prospecting work(1989)	500 samples				4379	(16)
1488	Egün gol	Altered serpentinite	chalcopyrite, malachite, azurite	magnetic pyrite	Cu-0,01-0,1%		Prospecting work(1985)					1812	(15)
1491	Altgana gol	Stockwork: 850m x550m	molybdenite		Mo-0,006-0,035%; Ag-1,5g/t	Mo-14700t	Geological mapping(1965); 1985*	920 samples(1985)		1269m.cub(1985)	40,8m(1985)	1812, 3976, 5000	(14)
1492	Khan jargalant uul	Skarnization zone: 90m x10m	malachite, azurite, chrysocolla	magnetic	Cu-0,01-1,0%		Geological mapping(1975)**	475 samples		507,6m.cub		2660	
1493	Alag tolgoi	Stock: 0,78sq.km	schreibite		Mo-0,01%; Cu-0,01%; Sr-0,005%		Geological mapping(1975)**			400m.cub		2660, 3832	
1494	Donkhor bulag	Altered zone	magnetite	pyrite	Cu-0,003%		Geological mapping(1975)**	62 samples		295,6m.cub		2660	(13)
1495	Nergui	Quartz vein: 0,7, 2,0m	gold	martite, galena, magnetite	Au-0,2g/t; Ag-6,8g/t		Prospecting work(1963)	1300 samples		16digs		1812	
1500	Nergui	Skarn: 50m	chalcopyrite, malachite, azurite		Cu-		Geological mapping(1964)**					1828	
1525	Khomoni gol	Quartz vein: 0,05-0,1m			Mo-0,05-1,5%		Geological mapping(1968)**					1827	
1529	Nergui (No74)	Thin vein:	andalusite, cyanite		Al-30-40%		Geological mapping(1967)**					1756	
1530	Saikhan gol	Lenticular body: 9000m x10m	pyrolusite	hematite	Fe-12,11%; Mn-19,6%	Fe-42,9million ton; Mn-65,5million ton	Geological mapping(1958)**; (1987)*			344m.cub(1987)		486, 938, 4286	
1531	Baga tsagaan gol	Lenticular body: 7000m x23,2m	pyrolusite, hematite		Mn-23,63%; Fe-15,75%	Mn-48million ton; Fe-32million ton	Geological mapping(1987)*; (1958)**			102,3m.cub		938, 4286	
1567	Khurilt gol	Quartz-carbonate vein: 80m x0,35m	galena	chalcopyrite, pyrite, chalcocite	Cu-0,16-0,72%		Prospecting work(1941)			150m.cub		370	(20)
1568	Ult gol	Quartz vein: 70m x0,5m	galena	chalcopyrite, malachite, azurite	Pb-0,001-0,01%		Geological mapping(1958)**					938	
1581	Ubur teclim gol	Altered zone: 4000m x300m			Pb-0,09%		Geological mapping(1974)**	287 samples		150m.cub		2256	
1583	Ikh khujiruin khuree	Fracture zone: 200m x50m	chalcopyrite, malachite, cuprite	pyrite, covellite, tenorite	Cu-2,1%		Prospecting work(1966)	709 samples		177m.cub		1812, 1814	

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology										Deposit (1)		
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metalogenic province	Country rock	Alteration	Age of mineralization		
1585	Gua vlaan uul	Metasomatic	Bulgan	48 55 00	101 53 00	North Mongolia	Ider	Dipression	syenitic porphyry, granosyenite	volcanogenic sedimentary rocks	Triassic(T1-2)	Triassic(T1-2)	North Mongolia	volcanogenic sedimentary rocks				
1586	Zost tolgoi	Metasomatic	Arkhangai	48 43 00	101 25 00	North Mongolia	Ider	Dipression	leucocratic granite, granite porphyry	andesite, andesite porphyry, tuff	Permian(P1)	Permian-Triassic(P2-T1)	North Mongolia	andesite, andesite porphyry, tuff				
1587	Yargai	Hydrothermal	Arkhangai	48 47 00	101 19 00	North Mongolia	Ider	Uplift	leucocratic granite porphyry			Permian(P2)	North Mongolia	leucocratic granite porphyry				
1608	Usni gasar	Hydrothermal	Arkhangai	48 19 30	101 02 30	North Mongolia	Tariat-selenge	Dipression	granite			Lower Triassic		granite				
1609	Burigin gorkhi	Hydrothermal	Arkhangai	48 37 15	101 07 10	North Mongolia	Ider	Uplift	granite, granosyenite, syenite	dacite, andesite-dacite, porphyrite, rhyolite porphyrite	Lower Devonian	Upper Permian-Lower Triassic		granite, granosyenite, syenite				
1611	Khavgai mod	Hydrothermal	Arkhangai	48 09 00	101 55 00	North Mongolia	Tariat-selenge	Dipression	granite			Lower paleozoic		granite				
1612	Khuiten nuur		Arkhangai	48 05 00	101 56 00				granite	acidic volcanic rocks	Lower-Upper Permian	Lower Paleozoic		acidic volcanic rocks				
1802	Eren gol	Sedimentary	Bulgan	50 05 00	102 28 00	North Mongolia	Zed	Dipression		sediment	Quaternary(QIII-IV)		Zed	sediment				
1803	Tsagaan chuluuian bulag	Sedimentary	Bulgan	50 07 00	103 44 00	North Mongolia	Zed	Dipression		sand, pebble	Quaternary(QIV)		North Mongolia	sand, pebble				
1865	Zaamar nuuru	Hydrothermal Au	Tub	48 32 00	104 36 00	Mongol-Ubur baikal	North Khentiy	Uplift	gabbro-diorite		Upper Triassic-Jurassic		North Khentiy	gabbro-diorite		Upper Triassic-Jurassic		
1918	Urmen tsagaan nuur	Hydrothermal	Bulgan	48 48 00	102 55 00	North Mongolia	Tariat-selenge	Dipression		trachyte porphyry, trachyandesite porphyry	Triassic(T)			trachyte porphyry, trachyandesite porphyry				
1922	Khudag	Sedimentary	Tub	48 25 00	104 42 00	Mongol-Ubur baikal	North Khentiy	Uplift		sand, pebble, clay	Quaternary(QII-III)		North Khentiy	sand, pebble, clay				
1923	Uguunerian am	Sedimentary	Tub	48 26 00	104 34 00	Mongol-Ubur baikal	North Khentiy	Uplift		sediment	Quaternary		North Khentiy	sediment				
1924	Ait khunde	Sedimentary	Tub	48 23 00	104 33 00	Mongol-Ubur baikal	North Khentiy	Uplift		clay, pebble, sediment	Quaternary		North Khentiy	clay, pebble, sediment				
1926	Ar tamsag	Sedimentary	Tub	48 20 00	104 31 00	Mongol-Ubur baikal	North Khentiy	Dipression		clay, sand, pebble	Quaternary		North Khentiy	clay, sand, pebble				

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (9b/17)

No.	Deposit name	Deposit (2)				Previous survey				Reference	Remarks (surveyed occurrence No.)	
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Grochemistry	Geophysics			Trench and pit
1585	Gua ulaan uul	Altered zone: 4500m x200m			Cu-0.12-0.25%; Au-0.1g/t		Geological mapping(1973)**; 724 samples(1973)	Complex work(1976)	255.7m.cub(1973)		2043, 2676	(10)
1586	Zost tolgoi	Altered zone: 2.3km x1km	malachite, chalcopryrite	galena, sphalerite	Cu-0.01-0.02%; Ag-0.1g/t		Prospecting work(1981, 1983)*	Magnetics, Electrics	408.6m		2283, 3703, 2924	(11)
1587	Yargail	Lentkular? stockwork: 200m x40m	cuprite, molybdenite		Cu-0.007-0.3%		Prospecting work(1984)	Electrics	2m cub		3703	(12)
1608	Usni gasar	Altered zone: 2.3sq km	pyrite		Cu-0.001-0.03%; Au-0.1-0.2g/t		Geological mapping(1980)**		4holes		3228	
1609	Burigin gorkhi	Fracture zone:	malachite		Cu-0.005-0.01%		Geological mapping(1975)**		122.3m.cub		2283	
1611	Khavtga mod	Fracture zone:	malachite		Cu-0.04%		Geological mapping(1980)**				3228	
1612	Khuuten nuur	Quartz vein: 100m x1.5m	gold		Au-0.1-0.3g/t; Ag-0.2-0.7g/t		Geological mapping(1980)**				3228	
1802	Eren gol	Bed: 0.6m	gold		Au-5g/t		Prospecting work(1942), geological mapping(1994)**		36.7m pits(1942), 30 pits (1994)		372, 4862	
1803	Tsagaan chuloutin bulag	Valley: 2500m x50m	gold		Au-sign		Prospecting work(1942)		30.4m pits		372	
1865	Zaamar nuruu	Quartz vein: 80m x1.5m	gold	malachite, limonite	Au-45g/t		Geological mapping(1972)**				2097, 1960	
1918	Urmen tsagaan nuur	Altered zone: 5km x2km	chalcopryrite	malachite	Cu-0.008-0.01%; Au-0.1g/t; Ag-2.3-6.6g/t		Geological mapping(1973)**		283.4m.cub		2043	(30)
1922	Khudag	Gold bearing bed: 0.4m wide	gold		Au-14154 mg/m.cub		Prospecting work(1981)		1798m		4304	
1923	Uguumeriin am	Gold bearing bed: 2000m x6m	gold		Au-100-367mg/m.cub		Geological mapping(1971)**; prospecting work(1981)		6pits		1960	
1924	Ahl khunde	Gold bearing bed: 1m wide	gold		Au-0.282 mg/m.cub		Geological mapping(1979)*		28m pits		3600	
1926	Ar tamsag	Gold bearing bed: 100-340m	gold		Au-668-1702mg/m.cub		Prospecting work(1981)		7018m pits		4304	

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology										Deposit (1)	
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenetic province	Country rock	Alteration	Age of mineralization	
1928	Ubur urt	Sedimentary	Tub	48 17 00	104 46 00	Mongol-Ubur ba ykal	North Khentiy	Dipression		sandstone, conglomerate, clay, sand, pebble	K1, N2		North Khentiy	clay, sand, pebble			
1929	Baruun chingelt	Sedimentary	Tub	48 14 00	104 41 00	Mongol-Ubur ba ykal	North Khentiy	Dipression	granite	sandstone, clay, pebble	Carboniferous(C1, N2)	Paleozoic(PZ2)	North Khentiy	clay, pebble			
1930	Shar borjin uut	Hydrothermal Au	Tub	48 03 00	104 41 00	Mongol-Ubur ba ykal	North Khentiy	Dipression	granite		Middle Paleozoic		North Khentiy	granite	Berritization, Limonitization	Upper Paleozoic	
1931	Dulaan	Sedimentary	Tub	48 12 00	104 40 00	Mongol-Ubur ba ykal	North Khentiy	Dipression	granite	sandstone, shale, clay, pebble	Lower Carboniferous, N2	Middle Paleozoic	North Khentiy	clay, pebble			
1933	Boodog	Sedimentary	Tub	48 09 00	104 55 00	Mongol-Ubur ba ykal	North Khentiy	Dipression		Sand, pebble, clay	Quaternary		North Khentiy	Sand, pebble, clay			
1934	Badakh	Hydrothermal Au	Tub	48 08 00	104 56 00	Mongol-Ubur ba ykal	North Khentiy	Dipression	granite	sandstone, siltstone	Lower-Middle Paleozoic		North Khentiy	sandstone, siltstone	Berritization, Silicification	Middle Paleozoic	
1935	Tsogt	Hydrothermal	Tub	48 06 00	104 20 00	Mongol-Ubur ba ykal	North Khentiy	Dipression		meta-sandstone	Paleozoic(PZ1)		North Khentiy	meta-sandstone		Permian	
1936	Tsagaan chiluu	Hydrothermal, placer	Tub	48 04 00	104 55 00	Mongol-Ubur ba ykal	North Khentiy	Uplift	granite	sandstone	Lower Paleozoic	Middle Paleozoic	North Khentiy	granite, sandstone			
2756	Yashih-II (N4)	Magmatic	Selenge	48 56 00	104 50 00	North Mongolia	Tariat-selenge	Dipression		siltstone	Lower Carboniferous		North Mongolia	siltstone			
2757	Zuslan toigo-18	Magmatic, metasomatic	Selenge	48 54 00	104 48 00	North Mongolia	Tariat-selenge	Graben	diorite	siltstone	Lower Carboniferous	Upper Permian-Lower Triassic	North Mongolia	diorite			
2760	Shar us gol	Sedimentary	Selenge	48 51 00	104 58 00	North Mongolia	Tariat-selenge	Horst		sand, pebble	Quaternary(QIII)		North Khentiy	sand, pebble			
2761	Bayantsogt	Metamorph	Selenge	48 51 00	104 48 00	North Mongolia	Tariat-selenge	Graben		aleurolite, claystone	Lower Carboniferous			aleurolite, claystone	Silicification(aleurolite-ornamental rock)		
2763	Khoshuu toigoj	Hydrothermal-metasomatic	Selenge	48 49 00	104 47 00	North Mongolia	Tariat-selenge	Graben	granite	sandstone, siltstone, conglomerate	Lower Carboniferous	Upper Permian-Lower Triassic	North Mongolia	granite			

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (10b/17)

No.	Deposit name	Deposit (2)					Previous survey				Reference Report number	Remarks (surveyed occurrence No.)	
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit			Drilling
1928	Ubur urt	Gold bearing flow: 400m	gold		Au (II, III)-16-69-8, 0mg/m.cub; Au(I)-8-27%, 0mg/m.cub		Prospecting work(1981)			369.6m		4304	
1929	Baruun chingelt	Gold bearing bed: 0.4-1m wide	gold		Au-177:1169 mg/m.cub		Prospecting work(1981)			1027.4m		4304	
1930	Shar borjin uul	Altered zone: 900m x100m	gold	galena, chalcopyrite, sphalerite, malachite	Au-0.006-88.04g/t		Geophysical mapping(1984)	3725 samples(1984)	Magnetics (1984)			3801	
1931	Dulaan	Gold bearing flow	gold		Au-43-160mg/m.cub		Prospecting work(1981)			419.2m		4304	
1933	Boodog	Gold bearing bed: 0.4m wide	gold		Au-100-420mg/m.cub		Prospecting work(1988)			784.4m		4304	
1934	Badarkh	Sulfid zone: 3500m x220m	gold	chalcopyrite, pyrite, galena, sphalerite	Au-1.3g/t		Geological mapping(1984)*			1325m(1984)	713m.cub	3979	
1935	Tsogt	Quartz vein:	gold		Au-0.1-0.2g/t		Geological mapping(1985)*	1600 samples				3979	(1)
1936	Tsagaan chuluut	Gold bearing bed: 3.5m; Quartz vein: 70m x2.0m; Alteration zone: 150m x20m	gold		Au(quartz vein) - 0.01-3.0g/t; Au(alt zone)- 0.3g/t; Au-0.02 mg/m.cub		Geological mapping(1985)*		Magnetics	610.4m	3616.9m.cub	3988, 3979	
2756	Yashilt-II (N+)	Diorite stock: 100m x50m			Mo-0.02%	Mo-135t	Geological mapping(1991)*					4548	
2757	Zulsan tolgoi-18	Altered zone: 500m x500m			Cu-0.01%	Cu-10,125t	Geological mapping(1991)*					4548	
2760	Shar us gol	Bed(1): 440m x1.2m; Bed(2): 220m	gold		Au-20mg/m.cub	Au-270kg	Geological mapping(1991)*			50m		4548	
2761	Bayantsagt	Aleurolic bed: 100m x100m			P2=8000m.cub		Geological mapping(1991)*					4548	
2763	Khoshuu tolgoi	Quartz vein: 100m x0.2m	chalcopyrite	malachite, pyrite	Cu-0.05-1.0%	Cu-11.4t	Geological mapping(1991)*		Electrics			4548	

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology						Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Metagenetic province	Country rock	Alteration	Age of mineralization
2767	Toi river's bank	Sedimentary	Selenge	48 44 00	104 44 00	North Mongolia	Tariat-selenge	Horst		sandstone, clay, pebble	Quaternary(QIII-III)	North Khentiy	sand, clay, pebble		
2770	Toi river	Sedimentary	Selenge	48 42 00	104 45 00	North Mongolia	Tariat-selenge	Horst		sandstone, clay, pebble	Quaternary(QIV)	North Khentiy	sand, clay, pebble		
2772	Bulgain sair	Sedimentary	Selenge	48 42 00	104 44 00	North Mongolia	Tariat-selenge	Horst		aleurolitic, clay	Quaternary		aleurolitized clay		
2774	Anand (No109)	Metasomatic Au occurrence	Selenge	48 41 00	104 59 00	North Mongolia	Tariat-selenge	Graben	granodiorite, granite		Middle-Upper Ordovician	North Khentiy	granodiorite, granite	Silicification, Berezitization	Lower Jurassic
3356	Jargalant	Hydrothermal-metasomatic	Bulgan	50 15 00	102 45 00	North Mongolia	Zed	Dipression	leucocratic granite	schist	Vendian-Lower Cambrian		leucocratic granite		
3511	Ar zniogo	Sedimentary	Bulgan	50 02 00	102 10 00	North Mongolia	Zed	Dipression		sediment	Quaternary(QIII-IV)	Zed	sediment		
3743	118 vein	Hydrothermal Au	Tub	48 16 40	104 33 45	North Mongolia	Tariat-selenge	Dipression		clay schist, sandstone	Middle Cambrian-Lower Ordovician		clay schist, sandstone		
3744	117 vein	Hydrothermal Au	Tub	48 16 35	104 33 20	North Mongolia	Tariat-selenge	Dipression		schist, sandstone	Middle Cambrian-Lower Ordovician		schist, sandstone		
3745	194c vein	Hydrothermal Au	Tub	48 15 25	104 33 05	North Mongolia	Tariat-selenge	Dipression		clay schist, sandstone	Middle Cambrian-Lower Ordovician		clay schist, sandstone		
3746	188 vein	Hydrothermal Au	Tub	48 16 35	104 31 35	North Mongolia	Tariat-selenge	Dipression		schist, sandstone			schist, sandstone		
3747	188-1 vein	Hydrothermal Au	Tub	48 16 35	104 31 40	Central Mongolia	Tariat-selenge	Dipression		clay schist, sandstone	Middle Cambrian-Lower Ordovician		clay schist, sandstone		
3748	191 vein	Hydrothermal-metasomatic	Tub	48 16 35	104 31 27	North Mongolia	Tariat-selenge	Dipression		schist, sandstone	Middle Cambrian-Lower Ordovician		schist, sandstone		
260, 194, 3749	194a, 194b veins	Hydrothermal Au	Tub	48 15 44	104 35 05	North Mongolia	Tariat-selenge	Dipression		schist, sandstone	Middle Cambrian-Lower Ordovician		schist, sandstone		
3750	197 vein	Hydrothermal Au	Tub	48 18 03	104 35 07	North Mongolia	Tariat-selenge	Dipression		schist, sandstone	Middle Cambrian-Lower Ordovician		schist, sandstone		
3751	56 vein	Hydrothermal Au	Tub	48 16 36	104 34 50	North Mongolia	Tariat-selenge	Dipression		schist, sandstone	Middle Cambrian-Lower Ordovician		schist, sandstone		

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (11b/17)

No.	Deposit name	Deposit (2)					Previous survey					Reference Report number	Remarks (surveyed occurrence No.)
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling		
2767	Tol river's bank	Bed(1): 25000m x180m; Bed(2): 5000m x60m	gold		Au(II)-580mg/m.cub; Au(II)-1660mg/m.cub	Au(II)-1461kg; Au(II)-398kg	Geological mapping(1991)*			208m pits		4548	
2770	Tol river	Bed: 5000m x150m	gold		Au-1080mg/m.cub	Au-648kg	Geological mapping(1991)*			1500m		4548	
2772	Bulgim sair	Clay bed: 2.0m (wide)			Clay- P=500000m.cub		Geological mapping(1991)*			40m pits		4548	
2774	Anaad (No.109)	Altered zone: 600m x5.0m			Au-0.1-1.0g/l	Au-0.54t	Geological mapping(1991)*		Magnetics. Electrics(1991)	254.7m.long		4548	
3356	Jargalan	Fracture zone: 80m x2m			Cu-0.72%		Prospecting work(1988)					4552	
3511	Ar zorlogo	Bed: 1350m x210m	gold		Au-3.77mg/m.cub	Au-2.03kg	Geological mapping(1997)*			18pits		5170	
3743	118 vein	Altered zone: 30m	pyrite, chalcopyrite	malachite, azurite	Au-0.1-192g/t	Au-6.6t	Prospecting work(1989)			Mining work 157m (1989)		4706	
3744	117 vein	Quartz vein: 300mx 1.6m			Au-0.1-50.9g/t	Au-1.7t	Prospecting work(1989)			24igs(1989)		4706	
3745	194c vein	Quartz vein:	pyrite, chalcopyrite		Au-0.5-60.2g/t	Au-2.1t	Prospecting work(1989)			13287m.cub (1989)		4706	
3746	188 vein	Quartz vein:	pyrite, magnetic pyrite		Au-		Prospecting work(1989)					4706	
3747	188-1 vein	Hydro-metasomatic: 40m	pyrite, chalcopyrite		Au-0.1-66.0g/t	Au-1.6t	Prospecting work(1989)			24igs(1989)		4706	
3748	191 vein	Hydro-metasomatic? (Hydro-metas alteration): 10m wide	pyrite, chalcopyrite, galena		Au-0.1-72.4g/t	Au-1.1t	Prospecting work(1989)			2holes(1989)		4706	
3749	260, 194, 194a, 194b veins	Quartz vein: 600m	pyrite, chalcopyrite				Prospecting work(1989)			2holes(1989)		4706	
3750	197 vein	Hydro-metasomatic: 15-30m	pyrite, chalcopyrite, magnetic pyrite		Au-0.1-21.0g/t	Au-0.68t	Prospecting work(1989)			909.6m(1989)		4706	
3751	56 vein	Quartz vein: 1000m x7.8m	pyrite, chalcopyrite		Au-0.1-89.5g/t	Au-2.3t	Prospecting work(1989)			909.6m(1989)		4706	

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (12a/17)

No.	Deposit name	Deposit type	Location			Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenic province	Country rock	Alteration	Age of mineralization
3752	56a vein	Hydrothermal Au	Tub	48 16 54	104 34 49	North Mongolia	Tariat-selenge	Depression		sandstone, schist	Middle Cambrian-Lower Ordovician	Ordovician		sandstone, schist		
3753	55 vein	Hydrothermal Au	Tub	48 16 45	104 35 03	North Mongolia	Tariat-selenge	Depression		sandstone, schist	Middle Cambrian-Lower Ordovician	Ordovician		sandstone, schist		
3754	115 vein	Hydrothermal-metasomatic	Tub	48 16 11	104 31 38	North Mongolia	Tariat-selenge	Depression		sandstone, schist	Middle Cambrian-Lower Ordovician	Ordovician		sandstone, schist		
3755	188-2 vein	Hydrothermal Au	Tub	48 16 32	104 31 20	North Mongolia	Tariat-selenge	Depression		schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician		schist, sandstone		
3756	188-3 vein	Hydrothermal Au	Tub	48 16 35	104 31 25	North Mongolia	Tariat-selenge	Depression		schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician		schist, sandstone		
3757	189 vein	Hydrothermal Au	Tub	48 16 14	104 32 20	North Mongolia	Tariat-selenge	Depression		schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician		schist, sandstone		
3758	Vein-107	Hydrothermal	Tub	48 17 04	104 29 32	North Mongolia	Tariat-selenge	Depression		sandstone, shale	Cambrian-Ordovician(E2-O1)			sandstone, shale		Mesozoic(MZ1)
3759	198, 181, 182, 183 veins	Hydrothermal Au	Tub	48 14 15	104 30 45	North Mongolia	Tariat-selenge	Depression		schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician		schist, sandstone		
4023	Occurrence-16	Hydrothermal Au occurrence	Bulgan	50 15 15	104 28 30	North Mongolia	Zelter	Dome/cupola	granite				Zelter	granite	Silicification, Sulphidization	
4024	Occurrence-14	Hydrothermal Au	Bulgan	50 15 40	104 27 35	North Mongolia	Zelter	Dome/cupola	granite				Zelter	granite	Sulfidization	
4025	Occurrence-7	Hydrothermal Au	Bulgan	50 17 05	104 31 03	North Mongolia	Zelter	Dome/cupola	granite		Middle Jurassic		Zelter	granite		
4026	Occurrence-15	Hydrothermal Au	Bulgan	50 15 30	104 27 48	North Mongolia	Zelter	Dome/cupola	granite		Middle Jurassic		Zelter	granite	Pyritization, Limonitization	
4027	Occurrence-8	Hydrothermal Au	Bulgan	50 16 27	104 29 46	North Mongolia	Zelter	Dome/cupola		sandstone	Lower-Middle Cambrian		Zelter	sandstone		
4028	Occurrence-4	Hydrothermal Au	Bulgan	50 17 45	104 30 40	North Mongolia	Zelter	Dome/cupola	granite		Middle Jurassic		Zelter	granite	Pyritization, Silicification	
4029	Occurrence-5	Hydrothermal Au	Bulgan	50 17 50	104 31 30	North Mongolia	Zelter	Dome/cupola	granite		Middle Jurassic		Zelter	granite	Pyritization, Limonitization	
4030	Occurrence-6	Skarn	Bulgan	50 17 20	104 34 10	North Mongolia	Zelter	Dome/cupola		meta-sandstone	Lower-Middle Cambrian		Zelter	Meta-sandstone		
4031	Occurrence-24	Hydrothermal	Bulgan	50 13 10	104 28 08	North Mongolia	Zelter	Dome/cupola	granosyenitic	sandstone	Lower-Middle Cambrian	Middle Jurassic	Zelter	granosyenite		

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (12b/17)

No.	Deposit name	Deposit (2)				Previous survey				Reference	Remarks (surveyed occurrence No.)	
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics			Trench and pit
3752	5fa vein	Quartz vein: 500m x1.7m	chalcopyrite, pyrite		Au-6.35g/t	Au-0.24t	Prospecting work(1989)				4706	
3753	55 vein	Quartz vein: 1300m x 7m	pyrite, magnetic pyrite		Au-1.8g/t	Au-1.1t	Prospecting work(1989)			1716, 1m(1989)	4706	
3754	115 vein	Quartz vein: 300m x3m	pyrite, galena		Au-0.1-1.30g/t	Au-3.2t	Prospecting work(1989)			1225m(1989)	4706	
3755	188-2 vein	Quartz vein: 300m x 2.5m	pyrite, magnetic pyrite		Au-0.5-16.3g/t		Prospecting work(1989)			2holes	4706	
3756	188-3 vein	Hydrothermal alteration			Au-0.5-10.0g/t	Au-0.35t	Prospecting work(1989)			2holes	4706	
3757	189 vein	Hydrothermal metasomatic	pyrite, chalcopyrite		Au-0.1-50g/t	Au-0.84t	Prospecting work(1989)			1882.5m(1989)	4706	
3758	Vein-107	Quartz vein: 200m x2m	pyrite, chalcopyrite		Au-30g/t	Au-0.7t	Prospecting work(1989)				4706	(1)
3759	198, 181, 182, 183 veins	Hydrothermal metasomatic	Pyrite, magnetic pyrite		Au-6.8g/t	Au-2.4t	Prospecting work(1989)				4706	
4023	Occurrence-16	Stockwork: 500m x 10m	gold	molybdenite, galena	Au-0.03g/t, Ag-70g/t	Au-40.5kg, Ag-67.5kg	Geological mapping(1995)*			3digs	5031	
4024	Occurrence-14	Stockwork	gold		Au-0.2g/t	Au-1.6kg	geological mapping(1995)*			3digs	5031	
4025	Occurrence-7	Stockwork: 50m x50m	gold	pyrite	Au-0.2g/t	Au-67.5kg	Geological mapping(1996)*				5031	
4026	Occurrence-15	Stockwork: 700m x0.2m			Au-0.2g/t, Ag-30.0g/t	Au-3.7kg, Ag-567kg	Geological mapping(1995)*			2digs	5031	
4027	Occurrence-8	Stockwork	gold		Au-0.2g/t	Au-34kg	Geological mapping(1994)*				5031	
4028	Occurrence-4	Altered zone: 50m x50m	gold		Au-0.01g/t	Au-3.3kg	Geological mapping(1996)*				5031	
4029	Occurrence-5	Altered zone: 100m x50m	gold		Au-0.02g/t	Au-21.6kg	Geological mapping(1996)*				5031	
4030	Occurrence-6	Lenticular body: 60m x20m	gold		Au-0.01g/t	Au-3.2kg	Geological mapping(1996)*				5031	
4031	Occurrence-24	Quartz vein: 200m x200m	gold		Au-0.01g/t	Au-108kg	Geological mapping(1996)*				5031	

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (13a/17)

No.	Deposit name	Deposit type	Location			Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metallogenic province	Country rock	Alteration	Age of mineralization
4032	Gaisuurkhan	Hydrothermal Au	Bulgan	50 10 02	104 25 00	North Mongolia	Zelter	Dome/cupola	granite	limestone, sandstone	Lower-Middle Cambrian	Middle Jurassic	Zelter	granite	Pyritization	
4033	Occurrences-30	Hydrothermal Au	Bulgan	50 17 23	104 33 28	North Mongolia	Zelter		leucocratic granite	sandstone	Lower-Middle Cambrian	Middle Jurassic	Zelter	leucocratic granite		
4034	Barv-44	Hydrothermal	Selenge	50 22 58	104 56 00	North Mongolia	Zelter	Deep fault	amazonitic granite	andesite	Lower Permian		Zelter	amazonite granite		
4035	Barv-45	Hydrothermal	Selenge	50 23 20	104 56 25	North Mongolia	Zelter	Deep fault	granite	andesite	Lower Permian		Zelter	granite		
4041	Nomt uul	Skam	Bulgan	50 12 57	104 36 20	North Mongolia	Zelter, butecelin nuruu	Deep fault	leucocratic granite	meta-andesite, meta-aleurolite	Lower Permian	Middle Jurassic	Zelter	leucogranite		
4042	Khuut	Skam	Bulgan	50 13 35	104 37 02	North Mongolia	Zelter, butecelin nuruu	Deep fault	leucocratic granite	meta-andesite, meta-aleurolite	Lower Permian	Middle Jurassic	Zelter	Leucogranite		
4043	Barv-152	Sedimentary	Selenge	50 22 00	104 54 00	North Mongolia	Zelter, butecelin nuruu	Dipression		sand, pebble	Quaternary(QIV)		Zelter	sand, pebble		
4044	Barv-153	Sedimentary	Selenge	50 22 30	104 56 00	North Mongolia	Zelter, butecelin nuruu	Dipression		sand, pebble	Quaternary		Zelter	sand, pebble		
4045	Mukhar barv-155	Sedimentary	Selenge	50 22 30	104 58 45	North Mongolia	Zelter, butecelin nuruu	Dipression		sand, pebble, clay	Quaternary		Zelter	sand, pebble, clay		
4046	Monosoi-154	Sedimentary	Selenge	50 24 58	104 14 15	North Mongolia	Zelter-Butecelin nuruu	Dipression		sand and clay	Quaternary(QIV)		North Mongolia	sand and clay		
4049	Baruun khujir-151	Sedimentary	Bulgan	50 13 00	104 34 00	North Mongolia	Zelter, butecelin nuruu	Dipression		sandstone, clay, pebble	Quaternary(QIV)		Zelter	sand, clay, pebble		
4287	Bismuth occur-99		Selenge	50 14 40	104 53 20	North Mongolia	Zelter, zed	Fault	alkaline granite			Middle Proterozoic	Butecelin nuruu, Egin gol	alkaline granite		
4288	Bismuth occur-100		Selenge	50 14 40	104 53 20	North Mongolia	Zelter, zed	Fault	granite-gneiss			Middle Proterozoic	Butecelin nuruu, Egin gol	granite-gneiss		
4290	Maakhan uul		Selenge	50 15 57	104 54 37	North Mongolia	Zelter, Zed	Fault	granite-gneiss			Middle Proterozoic	Butecelin nuruu, Egin gol	granite-gneiss		
4291	Kheregch		Selenge	50 15 57	104 54 37	North Mongolia	Zelter, zed	Fault	gneissose granite			Middle Proterozoic	Butecelin nuruu, Egin gol	gneissose granite		
4302	Ulent		Selenge	50 14 50	104 52 55	North Mongolia	Zelter, zed	Fault	granite			Middle Proterozoic	Butecelin nuruu, Egin gol	granite		

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (13b/17)

No.	Deposit name	Deposit (2)										Previous survey				Reference		Remarks (surveyed occurrence No.)
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	Report number	Reference					
4032	Gatsuurkhan	Altered zone: 400m x150m	gold		Au-0.02g/t	Au-324kg	Geological mapping(1994)*	44m ² fields					5031					
4033	Occurrence-30	Stockwork: 200m x150m	gold		Au-0.02g/t	Au-81kg	Geological mapping(1996)*						5031					
4034	Barv-44	Quartz vein: 250m x100m	gold	limonite, hydrogocite, pyrite	Au-0.02-0.2g/t	Au-540kg	Geological mapping(1996)*		3digs				5031					
4035	Barv-45	Quartz vein: 250m x80m	gold	limonite, goethite, pyrite	Au-0.02-0.2g/t	Au-540kg	Geological mapping(1996)*		3digs				5031					
4041	Nomt uul	Lenticular body: 200m x80m	gold		Au-0.03g/t; Mo-0.001%	Au-43kg	Geological mapping(1994)*						5031					
4042	Khuut	Lenticular body: 400m x300m	gold		Au-0.01g/t; Cu-0.01%	Au-162kg	Geological mapping(1994)*						5031					
4043	Barv-152	Bed: 2km x0.4km	gold		Au-580mg/m.cub	Au-18kg	Geological mapping(1996)*		2line pits				5031					
4044	Barv-153	Placer:	gold		Au-		Geological mapping(1996)*		1line pits				5031					
4045	Mukhar barv-155	Placer:	gold		Au-		Geological mapping(1996)*		1line pits				5031					
4046	Monostei-154	Placer: 0.4m deep	gold		Au-30.0mg/m.cub		Geological mapping(1995)*		1line pits				5031					
4049	Barun khujir-151	Bed:	gold		Au-sign		geological mapping(1995)*		2pits				5031					
4287	Bismuth occur-99	Quartz vein: 20m x0.5m			Bi-0.01%; W-0.002%	Bi-0.054t; W-0.01t	Geological mapping(1996)*						5031					
4288	Bismuth occur-100	Quartz veins: 600m x7m			Bi-0.01%; W-0.001%	Bi-2.26t; W-0.22t	Geological mapping(1996)*						5031					
4290	Maikhan uul	Quartz vein: 10m x0.4m	bismuth		Bi-0.07%; Au-0.01g/t	Bi-0.15t	Geological mapping(1996)*						5031					
4291	Kheregeh	Quartz vein: 25m x1.5m			Bi-0.03%; W-0.005; Ag-1g/t	Bi-0.6t	Geological mapping(1996)*						5031					
4302	Ulent	Quartz vein: 50m x1.2m	bismuth	tungstenite	Bi-0.05-0.1%; W-0.01%; Ag-1-20g/t; Au-0.01g/t	Bi-10.0t; W-5.0t; Ag-0.1t	Geological mapping(1996)*						5031					

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (14a/17)

No.	Deposit name	Deposit type	Location				Geology							Deposit (1)		
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metalogenic province	Country rock	Alteration	Age of mineralization
4372	Khirbes uul	Hydrothermal	Khubsgul	50 26 10	102 00 30	North Mongolia	Tariat-selenge	Dipression	oligomict-flisheid sediments	Cambrian(E1)			oligomict-flisheid sediments			
4379	Subarga uul	Hydrothermal	Khubsgul	50 23 00	102 04 40	North Mongolia	Tariat-selenge	Dipression	limestone, aleurolite, sandstone, shale	Cambrian(E1)			limestone, aleurolite, sandstone, shale			
4380	Lustin ovoo (olgoi)	Contact metamorphism	Bulgan	50 09 15	102 44 30	North Mongolia	Tariat-selenge	Dipression	granite		Upper Permian-Lower Triassic		granite			
4381	Ovoomi bulan	Contact metamorphism	Bulgan	50 10 00	102 41 30	North Mongolia		Dipression	andesite-rhyolite	Vendian-Lower Cambrian			andesite-rhyolite			
4407	Baruun Khujir		Bulgan	50 16 38	104 26 00	North Mongolia	Zelter	Fault	Sandstone			Butectin nuruu	Sandstone			
4625	Serikh tsakhir uul	Hydrothermal-metasomatic	Khubsgul	50 11 15	102 16 10	North Mongolia	zed		andesite, tuff, limestone	Vendian-Cambrian(V-E1, E1)		Zed	andesite, tuff, limestone	Epilotization, Brecciation	Cambrian(E)	
4626	Salkhiimikh	Hydrothermal	Bulgan	50 10 40	102 20 50	North Mongolia	Zed		meta-volcanic rocks	Vendian-Cambrian(V-E1)	Triassic-Jurassic(T3-J1)	Zed	meta-volcanic rocks	Epilotization, Limonitization, Brecciation		
4629	Khust	Contact metamorphism	Bulgan	50 11 30	102 28 50	North Mongolia	Zed		acidic and alkaline metaeffusive rocks	Vendian-Cambrian	Cambrian, Jurassic(E2-3, J2-3)	Zed	granite	Hornfelsization, Silicification	Lower Cambrian	
4628	Jargalant	Hydrothermal	Bulgan	50 14 44	102 42 54	North Mongolia	Zed		meta-andesite, granite, granodiorite, leucocratic granite	Vendian-Cambrian(V-E1)	Cambrian, Permian-Triassic(E2-3, P2-T1)	Zed	granite, granodiorite, leucocratic granite	Silicification, Epilotization, Carbonitization, Chloritization	Cambrian	
4629	Salkhiimikh gol	Contact metamorphism	Khubsgul	50 07 30	102 11 50	North Mongolia	Zed		andesite-basalt, limestone, andesite, tuffaceous aleurolite	Cambrian(E1-2, E1, V-O1)	Devonian, Permian-Triassic(D2, P2-T1)	Zed	andesite-basalt, limestone, andesite, tuff-aleurolite	Skarnization, Epilotization, Sulphidization, Silicification, Marblization, limonitization	Cambrian(E)	
4630	Ar zorlogo	Hydrothermal	Bulgan	50 05 30	102 10 00	North Mongolia	Zed		andesite, limestone, siltstone, conglomerate	Lower Cambrian	Devonian, Permian-Triassic(D2, P2-T1)	Zed	alkaline syenite, leucocratic granite	Silicification?, Limonitization, Epilotization, Feldspartization	Middle Devonian	

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)				Previous survey						Remarks (surveyed occurrence No.)
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	
4372	Khirbes uul	Altered zone: 120m x850m	malachite	azurite	Cu-0.002-0.03%		Geological mapping(1992)**				4862	(21)
4379	Subriga uul	Altered zone: 100m x800m	malachite	azurite	Cu-0.002-0.03%; Mo-0.00015-0.0002%		Geological mapping(1992)**				4862	(22)
4380	Lusin овоо толгой	Skarn: 180m x20m			Cu-0.07-1%; Ag-0.00005%	45 samples	Geological mapping(1992)*		35,53m.cub		4862, 5170	
4381	Ovoonii bulan	Skarn: 140m x4.0m	malachite, azurite		Cu-0.001-0.007%; Nb-0.01%; Ag-1g/t; Be-0.001%		Geological mapping(1992)*		4digs		4862, 5170	
4407	Baruun khuir	Microgranite dyke: 500m x20m			Nb-0.01%; Ag-1g/t; Be-0.001%		Geological mapping(1996)*				5031	
4625	Serkh tsakhir uul	Quartz-epidote vein: 550m x0.17m	gold		Au-278.0g/t; Cu-0.01%	10 samples	Geological mapping(1997)*		9.4m.cub		5170	(23)
4626	Salkhitin ckh	Altered zone: 100m x50m. Automagmatic breccia: 700m x0.7m	gold		Au-0.00002g/l	13 samples	Geological mapping(1997)*				5170	
4627	Khust	Crystalline shale: 15m x4.1m; Skarn: 70m x37m; Stock: 300m x150m	malachite		Au-0.01-20.0g/t; Cu-0.001-0.002%	574 samples	Geological mapping(1997)*		218.8m.cub		5170	
4628	Jargalan	Altered zone: 100m x4.3m	gold	malachite, azurite	Au-0.05g/t; Cu-0.02%	17 samples	Geological mapping(1997)*		370m.cub		5170	
4629	Salkhitin gol	Ore body: 1-700m x20m; Ore body: 2-110m x50m; Ore body: 3-60m; Ore body: 4-80m x30m	gold	malachite, magnetite, hematite	Au-53.52g/t; Cu-0.01%; Ag-0.5g/t	103 samples	Geological mapping(1997)*				5170	(24)
4630	Ar zorlego	Altered zone: 2500m x2000m	gold		Au-0.03g/l		Geological mapping(1997)*		104m.cub		5170	

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (15a/17)

No.	Deposit name	Deposit type	Location			Geology					Deposit (1)						
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenetic province	Country rock	Alteration	Age of mineralization	
4631	Kbets uul	Epithermal	Bulgan	50 05 30	102 43 00	North Mongolia	Zed				limestone, andesite, rhyolite	Cambrian(E1-V, P1)		Zed	limestone, andesite, rhyolite		Lower Permian
4632	Bulagi am	Hydrothermal Au	Bulgan	50 01 20	102 37 40	North Mongolia	Zed	Deep fault	syenite, quartz-syenite, diorite	meta-andesite	Vendian-Lower Cambrian	Cambrian, Permian-Triassic(E2-3, P2-T1)	Zed		syenite, quartz-syenite, diorite	Silicification?, Skarnization, Sericitization	
4633	Kbonit uul		Khubs gul	50 14 38	102 03 30	North Mongolia	Zed		basalt, crystalline limestone, andesite, tuff, limestone		Riphean, Vendian(R1, V-E1)		Zed	basalt, crystalline limestone, andesite, tuff, limestone			
4636	Bayan ovoo uul	Contact metamorphism	Khubs gul	51 20 30	100 55 00	North Mongolia	Zed	Outcrop	granite, diorite, gabbro-diorite	metamorphic rocks	Middle Riphean	Middle-Upper Cambrian		North Mongolia	granite, diorite, gabbro-diorite	Hornfelsization, Marbleization, Skarnization	
4637	Uran zhurkh uul	Contact metamorphism	Khubs gul	51 34 30	100 50 40	North Mongolia	Zed	Outcrop	granite, plagiogranite	limestone, marble, crystalline shale, quartzite	Lower-Middle Riphean	Middle-Upper Cambrian		North Mongolia	limestone, marble, crystalline shale, quartzite	Epidotization, Feldspartization	
4638	Arvan gurvan ovooi uul	Hydrothermal	Khubs gul	51 27 30	100 43 00	North Mongolia	Zed		syenite	carbonite, basalt	Vendian-Cambrian(V-E1); Neocene(N1)	Devonian(D2)		North Mongolia	syenite	Silicification?, Greisenization, Limonitization	Middle Devonian
4639	Shigmal gol	Hydrothermal-metasomatic	Khubs gul	51 16 30	100 52 58	North Mongolia	Zed	Outcrop	syenite, quartz-syenite	basalt	Lower Neogene	Middle-Upper Devonian		North Mongolia	syenite, quartz-syenite	Silicification?, Feldspartization	Middle Devonian
4641	Tsagaangol	Hydrothermal	Khubs gul	50 55 20	101 43 50	North Mongolia	Zed	Outcrop	plagiogranite	gneiss, basalt	Riphean(R2); Neocene(N2)	Cambrian(E1-2)		North Mongolia	plagiogranite	Hornfelsization, Ironization	
4690	Darkhit uul	Plutogenic-hydrothermal	Arkhangai	48 58 30	101 11 30	North Mongolia	Khangaikheny	Dipression	alkaline granite	andesite, rhyolite	Lower-Middle Jurassic	Lower-Middle Jurassic		Central Mongolia	alkaline granite	Limonitization, Silicification?, Feldspartization, Epidotization	
4692	Tosongin khooloi	Sedimentary	Arkhangai	48 13 00	102 25 00	North Mongolia	Khangaikheny	Dipression		sediment	Quaternary(QIV)			Central Mongolia	sediment		
4693	Ikhegediin gol	Sedimentary	Arkhangai	48 54 50	100 34 40	North Mongolia	Khangaikheny	Dipression		sandstone, clay, pebble	Quaternary(QIV)			Central Mongolia	sand, clay, pebble		
5141	Khavchuugin gun jaiga	Sedimentary	Selenge	49 15 00	100 40 00	Mongol-Ubur bayal	North Khentiy	Dipression		sandstone, clay, pebble	Quaternary(QIII-IV)			North Khentiy	sand, clay, pebble		
5323	Dalkh ovoo-12	Metasomatic	Selenge	49 28 00	104 56 00	North Mongolia	Tariat-selenge	Dipression		andesite, dacite, rhyolite	Upper Permian				andesite, dacite, rhyolite		

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

(15b/17)

No.	Deposit name	Deposit (2)										Previous survey				Remarks (surveyed occurrence No.)
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	Report number				
4631	Klets uul	Altered zone: 1200m x80m	gold	malachite, magnetite	Au-0.2g/t	Au-146kg	Geological mapping(1997)*	19 samples	344m.cub		5170					
4632	Bulagi am	Skam: 800m x 44m	gold	malachite	Au-1.5g/t		Geological mapping(1997)*	74 samples	227m.cub		5170					
4633	Khont uul	Serpentine body: 20-40m wide		serpentine	(Facing rock-)		Geological mapping(1997)*		1dig		5170					
4636	Bayan ovoo uul	Skam: 60m x5.0m			Mo-0.0005%; Cu- 0.003%		Geological mapping(1997)**		162.1m.cub		5171					
4637	Uran zburkh uul	Altered zone: 1600m x450m			Mo-0.005%; Cu- 0.01%		Geological mapping(1997)**		392m.cub		5171					
4638	Arvan gurvan ovoos uul	Skam: 2-5.0m	magnetic pyrite, hematite? (hectite)	chalcopyrite, galena	Cu-0.002%; Pb- 0.001%; Zn- 0.003%; Sn- 0.0002%		Geological mapping(1997)**	18 samples	69.8m.cub		5171					
4639	Shiguul gol	Altered zone: 250m x1.0m			Mo-0.002%; Cu- 0.005%		Geological mapping(1997)**		141.2m.cub		5171					
4641	Tsagaangol	Skam: 850m x110m	gold	malachite	Au-0.005g/t; Cu- 0.02%		Geological mapping(1997)**	536 samples	309.8m.cub		5171					
4690	Darkhit uul	Quartz-tourmaline vein: 200m x1m		limonite, arsenopyrite, covellite, bornite	W-0.001-0.01%; Cu-0.005%; Ag- 0.5-20g/t		Geological mapping(1991)*									
4692	Tosongin khoodoi	Gold field: 6000m x500m	gold		Au-79.4mg/m.cub	Au-21.6kg	Prospecting work(1994)		11pits		4874					
4693	Ikh elgediin gol	Gold field: 14000m x150m	gold		Au-100mg/m.cub	Au-67kg	Prospecting work(1993)		15m pits		4874					
5141	Khavchuugin gun jalga	Lenticular bed: 300m x50m	gold		Au-293mg/m.cub	Au-7.5kg	Prospecting work(1991)		284.4m pits		4634					
5323	Dalkh ovoo-12	Dyke: 300m x10m	pyrite, chalcopyrite		Cu-		Geological mapping(1988)*		3digs		4553					

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (16a/17)

No.	Deposit name	Deposit type	Location			Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metalogenic province	Country rock	Alteration	Age of mineralization
5343	Alingyt	Hydrothermal	Arkhangai	48 25 27	100 24 00	North Mongolia	Ider	Uplift	granite			Middle Paleozoic		granite		
5344	Khunuin	Metamorph	Arkhangai	48 01 00	101 25 00	North Mongolia	Orkhon-selenge	Dipression	granite	rhyolite and felsite porphyry	Lower Permian	Permian-Triassic		rhyolite, rhyolite and felsite porphyry		
5354	Ar khahant	Hydrothermal	Bulgan	49 30 00	103 39 00	North Mongolia	Zed	Uplift		gneiss	Riphean			gneiss		
5362	Nergui	Hydrothermal	Selenge	49 57 00	104 41 00	North Mongolia	Tariat-selenge	Dipression	granite, pegmatite			Cambrian		granite, pegmatite	Cinnesization?	
5366	Khoshuu ovoo	Hydrothermal	Selenge	50 16 00	104 52 00	North Mongolia	Orkhon-selenge	Dipression		green shale	Cambrian			green shale		
5385	Nergui	Hydrothermal	Bulgan	50 07 00	102 28 00	North Mongolia	Zed	Dipression	granite					granite	North Mongolia	
5386	Nergui	Hydrothermal	Bulgan	49 59 00	102 25 00	North Mongolia	Tariat-selenge	Dipression		quartzite, andesite porphyry?	Upper Permian			andesite porphyry?, quartzite	North Mongolia	
5387	Bayasgalan-6	Metasomatic	Bulgan	49 58 00	102 30 00	North Mongolia	Tariat-selenge	Dipression	granite	rhyolite, rhyolite porphyry	Upper Permian	Lower-Middle Devonian		rhyolite, rhyolite porphyry		
5388	Tsakhir uul	Skarn	Bulgan	49 58 00	102 39 00	North Mongolia	Tariat-selenge	Dipression	granitoid	limestone, andesite	Vendian-Lower Cambrian	Lower-Middle Devonian		granitoid		
5389	Khurut	Skarn	Khubsugul	49 50 00	102 03 00	North Mongolia	Zed	Dipression		serpentine	Middle Cambrian			serpentine		
5390	Khushuut	hydrothermal-metasomatic	Khubsugul	49 37 00	102 14 00	North Mongolia	Zed	Dipression		brecciated porphyry?	Upper Carboniferous			brecciated porphyry?		
5391	Khavchirga	Skarn	Bulgan	49 50 00	103 29 00	North Mongolia	orkhon-selenge		leucocratic granite	trachyandesite-basalt, trachybasalt	Permian	Lower Jurassic		trachyandesite-basalt, trachybasalt		
5392	Uügen sant uul	Skarn	Selenge	49 42 00	104 56 00	North Mongolia	orkhon-selenge	Uplift		andesite, andesite-basalt, andesite porphyry	Permian			andesite, andesite porphyry, andesite-basalt		
5394	Zuun chingelt-21	hydrothermal-metasomatic	Tub	48 15 00	104 41 00	North Mongolia	Tariat-selenge	Dipression	granite			Middle Paleozoic		granite		
5398	Taagan jalgin bulag	Metasomatic	Bulgan	50 08 00	103 43 00	North Mongolia	Zed	Uplift		limestone, shale	Lower Cambrian			limestone, shale		
5400	Khujirtin gol	Hydrothermal	Bulgan	49 08 00	103 39 00	North Mongolia	Tariat-selenge	Dipression	granodiorite, granosyenite			Jurassic(1)		granodiorite, granosyenite		

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

(16b/17)

No.	Deposit name	Deposit (2)		Previous survey					Reference	Remarks (surveyed occurrence No.)		
		Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics			Trench and pit	Drilling
5343	Alingyt	Quartz vein: 1000m x500m		Cu-0.1%		Geological mapping(1980)**			116.1m.cub		3228	
5344	Khunuin	Altered zone: 1500m x800m		Cu-0.008-0.01%; Mo-0.0003-0.001%		Geological mapping(1980)**			366m.cub		3228	
5354	Ai khahaat	Pegmatite: 300m x2.0m	Titanomagnetite, zircon	Ta-0.064%; Nb-0.072%		Geological mapping(1976)					2593	
5362	Nergui	Fracture zone:		W.		Geological mapping(1946)**					473	
5366	Khoshuu ovoo	Quartz vein: 70m x0.6m		Bi-0.19-5.75%		Geological mapping(1943)					402	
5385	Nergui	Quartz vein: 45m x0.3m	pyrite, chalcopyrite	Cu-		Prospecting work(1941)					400	
5386	Nergui	Silicified zone: 200m x30m	malachite	Cu-0.17-0.41		Prospecting work(1971)*					1965	
5387	Bayasalan-6	Altered zone: 300m x100m	chalcopyrite, bornite	Cu-0.2-0.4%		Prospecting work(1978)			425m.cub	55.8m	2982	
5388	Tsakhir uul	Skarn: 800m x130m		Cu-2.35%; Ag-3g/t		Prospecting work(1977)			32.2m.cub		2982	
5389	Khuruut	Altered zone: 70m x30m		Cu-3-10%; Ag-0.001g/t		Geological mapping(1960)**					1500	
5390	Khushuut	Altered zone: 300-350m	malachite, azurite	Cu-3-10.0%		Geological mapping(1960)**					1500	
5391	Khan-chirga	Ore body: 70sq.km	chalcopyrite	Cu-0.05-0.5%; Ag-0.0005%		Geological mapping(1977)**					3832	
5392	Ughen sant uul	Quartz vein: 2m x0.2m	chalcocine, malachite, azurite	Cu-0.1-0.5%		Geological mapping(1982)**			64m.cub		3624	
5394	Zaun chingelt-21	Quartz-tourmaline vein: 15 x1.5m	malachite, azurite	Cu-0.003-0.5%		Geological mapping(1979)*					3600	
5398	Tsagaan jalgin bulag	Dispersed frame: 1200m x5000m		Cu-0.5-2.0g/m.cub		Geological mapping(1977)**					3156	
5400	Khujirim gol	Quartz vein: 600m x2000m	chalcopyrite, malachite	Cu-0.28-0.74%		Geological mapping(1967)**			24digs		1965	(38)

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology						Deposit (1)				
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenetic province	Country rock	Alteration	Age of mineralization
5403	Urmin Isegaan nuur	Metasomatic	Bulgan	48 48 00	102 55 00	North Mongolia	Orkhon-selenge	Dipression		rhyolite-dacite, rhyolite porphyry	Lower Permian		North Mongolia	rhyolite-dacite, rhyolite porphyry		
5404	Mogoin gol	Metasomatic	Bulgan	49 15 00	103 45 00	North Mongolia	Orkhon-selenge	Dipression		andesite-basalt porphyry?	Permian(P2)			andesite-basalt porphyry?		
5405	Gangat	Hydrothermal-metasomatic	Bulgan	48 50 00	103 18 00	North Mongolia	Orkhon-selenge	Dipression		rhyolite, felsite, andesite porphyrite	Permian			andesite porphyritic, rhyolite, felsite		
5410	Dashihung(56)	Metasomatic	Bulgan	49 46 00	104 41 00	North Mongolia	Orkhon-selenge	Dipression		andesite, andesite porphyry	Lower Permian			andesite, andesite porphyry		
5411	Zaun tarbagatai	Hydrothermal	Bulgan	50 14 00	104 25 00	North Mongolia	Orkhon-selenge	Dipression		granite, granodiorite	Cambrian			granite, granodiorite		
5418	Asgat uul	Hydrothermal	Selenge	49 06 00	104 42 00	North Mongolia	Tariat-selenge	Dipression		granite	Upper Permian			granite		
5437	Narminii am	Hydrothermal	Bulgan	50 12 05	102 11 20	North Mongolia	Zed			conglomerate, siltstone, limestone	Lower Cambrian		Zed	conglomerate, siltstone, limestone	Metabization, Silicification?	Lower Cambrian
3-2	Saikhan gol		Khubsгал	50 52 00	100 08 00	North Mongolia	Near Khubsгал	Graben						silicified rocks	Silicification zone	

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)				Previous survey				Reference	Remarks (surveyed occurrence No.)		
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics			Trench and pit	Drilling
5403	Urmii tsagaan nuur	Quartz vein: 11m x0.4m	malachite, azurite		Cu		Geological mapping(1972)**	1122 samples		283.4m.cub		3538	
5404	Mogoin gol	Altered zone: 5000m x3500m	malachite		Cu-0.11%		Prospecting work(1971)*			2digs		3209	(36)
5405	Gangat	Quartz-epidote vein: 0.1-0.2m	malachite		Cu-0.001-0.009%		Prospecting work(1979)*			3318m.cub		3538	
5410	Dashilung(56)	Altered zone: 60m x30m			Mn-0.03%; Cu-0.01%		Geological mapping(1982)**			1208m.cub		3624	
5411	Zuun tarbagatai	Quartz vein: 30m x0.7m	galena		Pb-0.05%; Au-1.0g/t; Ag-45g/t		Geological mapping(1982)**			123m.cub		3624	
5418	Asgat uul	Quartz vein:	pyrite, chalcopyrite		Cu		Geological mapping(1979)					3558	
5437	Narimii am	Ore body: 1-50m x7.6m; Ore body: 150m x1.5m	gold	malachite, azurite	Au-ore body 1-1284g/t; ore body 2-38.5g/t; Cu-0.2%		Geological mapping(1997)*	12 samples		35.6m.cub		5170	
3-2	Saikhan gol	Lenticular body: 1.5-2m; 20m	manganite?		MnO-16.68%	MnO-157000m.cub	Geological mapping(1946)**; (1958)**			344m.cub (1958)		938	

Previous survey (geology)

*-1:10 000 scale prospecting work; **-1:50 000 scale geological mapping; ***-1:200 000 scale geological mapping.

****-1:500 000 scale geological mapping; *****-1:1 000 000 scale geological mapping

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology					Deposit (1)				
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metalogenic province	Country rock	Alteration
1543	Berkhemeshe	Contact metamorphism	Khubsgul	50 26 00	99 49 00	North Mongolia	Near Khubsgul	Dipression		Limestone	E1 -khordeI series	North Mongolia	Limestone		Lower Cambrian
1594	Zagastai	Contact metasomatic	Zavkhan	48 16 00	97 15 00	North Mongolia	Ider	Uplift		Dolomite	Lower Cambrian	North Mongolia	Dolomite		Lower Cambrian
143	Occur-124-B-4,5	Hydrothermal	Zavkhan	48 24 00	97 38 00	North Mongolia	Ider	Uplift	Gabbroids		P2 -Ulaistai series	North Mongolia	Gabbroids		
583	Deed ulaan tolgoi	Hydrothermal-metasomatic	Khubsgul	49 32 00	98 41 00	North Mongolia	Tuva-Mongol	Uplift	Granite, leucocratic granite		D1-2 -Tes complex; C3	North Mongolia	Granite, leucocratic granite		
1572	Zost uul	Hydrothermal	Zavkhan	48 24 00	98 20 00	North Mongolia	Ider	Uplift	Granite porphyry, syenite porphyry	Crystallin shale, gneiss, limestone	PR3 -Khangai series	North Mongolia	Granite porphyry, syenite porphyry		Upper Permian-Lower Triassic
107	Quartzite	Secondary alteration	Zavkhan	48 57 00	97 50 00	North Mongolia	Ider	Dipression		Rhyolite porphyry, tuff	Permian	North Mongolia	Rhyolite porphyry, tuff		
103	Under ulaan	Secondary alteration	Zavkhan	48 53 00	97 08 00	North Mongolia	Ider	Dipression		Rhyolite porphyry, tuff	Permian	North Mongolia	Rhyolite porphyry, tuff		
3808	Ulaannuur	Greisen	Khubsgul	49 38 50	99 19 40	North Mongolia	Khubsgul	Dipression	Granite		D2 -Telmen complex	North Mongolia	Granite		
93	Bugsain gol	Hydrothermal-metasomatic	Khubsgul	49 11 00	99 42 00	North Mongolia	Near Khubsgul	Dipression	Granite	Volcanogenic sedimentary rocks	Permian	North Mongolia	Volcanogenic sedimentary rocks		
3991	Jimbe tolgoi	Hydrothermal-metasomatic	Khubsgul	49 20 50	99 30 05	North Mongolia	Ider	Dipression	Granite	Acid volcanic rocks, rhyolite	P2 -Khami series upper suite	North Mongolia	Acid volcanic rocks, rhyolite	Silicification, albitization	
5004	Jinsen tolgoi	Metasomatic	Zavkhan	49 16 00	96 48 00	North Mongolia	Ider	Uplift	Granite, granosyenite porphyry	Rhyolite porphyry, tuff	D1 -Bor nuur series	North Mongolia	Rhyolite porphyry, tuff		
481	Tagiin nuur	Hydrothermal	Zavkhan	48 58 00	97 15 00	North Mongolia	Ider	Dipression		Rhyolite, dacite porphyry, tuff	Lower Devonian	North Mongolia	Rhyolite, dacite porphyry, tuff		

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)					Previous survey					Reference	Remarks
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling		
1543	Berkhemesh	Skarn: 1600m x400m	Chalcopyrite, copper	Pyrite, magnetite	Cu-0.2%; Zn-0.005%		Geological mapping(1984)*	332 samples		31.2m.cub		3977	
1594	Zagatai	Skarn: 150m x15m	Magnetite		Cu-1.0%, Ag-50-60g/t		Geological mapping(1965)*					1755, 3576	
143	Occur-124-B-4.5	Alteration zone: 700m x700m	Chalcopyrite, malachite	Pyrite, lazurite	Cu-1.0%, Au-0.02g/t, Ag-8.0g/t		Geological mapping(1981)*					3576	
583	Deed ulaan tolgoi	Quartz-greisen veins: 90m x10m			Cu-0.01%, Ag-39g/t, Au-0.1g/t, 800t		Geological mapping(1987)*	385 samples		1192.4m.cub		4428	
1572	Zost uul	Stockwork: 1400m x380m	Molybdenite	Pyrite, chalcopyrite	Mo-0.01-0.25%	Mo-101961t	Prospecting work(1979)*; geological mapping(1977)*	5348 samples(1979)		2270.5m.cub trenches; 132m pit(1979)		3122, 2982, 2981	
107	Quartzite	Alteration zone: 800m x57m	Pyrite		Cu-0.008-0.01%; Mo-0.006%		Prospecting work(1979)			452.2m.cub		3122	
103	Under ulaan	Alteration zone: 800m x30m	Molybdenite	Chalcopyrite, pyrite, hematite, magnetite, malachite?	Cu-0.001-0.004%; Mo-0.001%		Prospecting work(1979)	766 samples				3122	
3808	Ulaannuur	Greisen zone: 250x150m			Cu-0.15%, Mo-0.02%	Mo-5400t	Prospecting work(1972)					4715	
93	Bugsin goi	Alteration zone: 3km			Cu-0.07%, Mo-0.01%		Geological mapping(1965)*					1828, 1814	
3991	Jimbe tolgoi	Alteration zone: 120m x2.3m	Copper		Cu-0.03%, Mo-0.0002%		Geological mapping(1993)*			87.7m.cub		4839	
5004	Jansen tolgoi	Alteration zone: 0.7 sq.km		Pyrite, limonite	Cu		Geological mapping(1977)*					2723	
481	Tagim nuur	Stockwork: 6600m x1000m			Cu-0.006%, Mo-0.003%		Geological mapping(1976)*	1203 samples		277.9m.cub		2986	

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology						Deposit (1)				
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenic province	Country rock	Alteration	Age of mineralization
1484	South Chubut	Hydrothermal	Khubs gul	49 26 00	99 51 00	North Mongolia	Near Khubs gul	Dpression	Granitic	Rhyolite porphyry, tuff, andesite porphyry	E2 - Bugsein gol suite	J1-2 - Bugsein gol complex	North Mongolia	Rhyolite porphyry, tuff, andesite porphyry		Lower-Middle Jurassic
1596	Khuurai sair	Hydrothermal	Zavkhan	48 39 00	98 13 00	North Mongolia	Ider	Uplift	Granite	Andesite porphyry, tuff	Lower-Middle Devonian		North Mongolia	Andesite porphyry, tuff		Middle Devonian
1472	Erkhil nour	Metasomatic	Khubs gul	49 51 00	99 48 00	North Mongolia	Near Khubs gul	Dpression	Granodiorite			Middle Paleozoic	North Mongolia	Granodiorite		Middle Paleozoic
573	Khunkh isakhir	Hydrothermal	Khubs gul	49 36 00	98 23 00	North Mongolia	Tuva-Mongol	Uplift	Granite	Acid volcanic rocks, shale, limestone	Lower-Middle Paleozoic	Upper Carboniferous	North Mongolia	Acid volcanic rocks, shale, limestone		
581	Curvan buudal uul	Hydrothermal	Khubs gul	49 45 00	98 33 00	North Mongolia	Tuva-Mongol	Uplift	Leucocratic granite	shale with sandstone beds	Upper Riphean	Upper Carboniferous	North Mongolia	Leucocratic granite		
3474	Narin azarga	Hydrothermal	Khubs gul	50 01 40	98 29 00	North Mongolia	Khubs gul	Uplift		Crystalline shale	R1.2 - Khug series		North Mongolia	Crystalline shale		
3475	Khaisiin belchir	Hydrothermal	Khubs gul	50 10 35	98 44 58	North Mongolia	Khubs gul	Uplift		Crystalline shale	R1.2 - khug series		North Mongolia	Crystalline shale		
1481	Naranbulag	Hydrothermal	Zavkhan	48 34 00	97 47 00	North Mongolia	Ider	Dpression	Granite porphyry, leucocratic granite			Upper Permian	North Mongolia	Granite porphyry, leucocratic granite		Upper Permian
2399	Solongot	Hydrothermal-metasomatic	Arkhangai	48 09 51	99 00 50	North Mongolia	Tariat-selenge	Uplift	Granite	Limestone, gneiss	Lower Proterozoic	Middle Riphean	North Mongolia	Limestone, gneiss	Skarnization, hornfelsization, silicification	
4617	Tavan tolgoi	Hydrothermal	Khubs gul	50 09 00	98 37 00	North Mongolia	Near Khubs gul	Uplift		Limestone, clay, shale	R1 - Muren suite, MZZ		North Mongolia	Limestone, clay, shale		
1456	Sharain khudag	Contact metasomatic	Zavkhan	49 27 00	96 48 00	North Mongolia	Ider	Uplift	Granite	Rhyolite, trachyhyolite	Upper Permian	PZ1 - Telmen complex	North Mongolia	Granite		Upper Permian
1457	Askhat uul	Hydrothermal	Zavkhan	49 22 00	96 36 00	North Mongolia	Ider	Uplift	Granite			PZ3 - Selenge complex	North Mongolia	Granite		Upper Paleozoic

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)					Previous survey					Remarks
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	
1484	South Chuluut	Alteration zone: 750m x100m	Chalcopyrite, malachite	Galkna, molybdenite, anglesite, sphaerelite	Cu-0.06%; Ag- 0.02g/t		Geological mapping(1972)*				2256	
1596	Khuraisair	Alteration zone: 500m x53m	Chalcopyrite, malachite		Cu-0.09%; Mo- 0.02%		Prospecting work(1979)*	56 samples	364m.cub		3569	
1472	Erkhil nuur	Skarn: 17m x 7m	Malachite, azurite	Sphalerite, molybdenite	Cu-0.38-3.85%; Zn-0.06-1.48%		Geological mapping(1969)*		11 digs		1279, 1914	
573	Khumbi tsukhii	Mineralization zone: 800m x150m			Cu-0.02%; Ag- 2.0g/t	Ag-20t	Geological mapping(1987)*	1560 samples	222.2 m.cub	140m	4428	
581	Gurvan buudal uul	Alteration zone: 5200m x1000m			Au-0.1-1.2g/t; Ag-1.2g/t		Geological mapping(1987)*		80m pits		4428	
3474	Narin azarga	Alteration zone: 2000m x400m	Pyrite	Hematite	Au-0.05-0.2g/t		Geological mapping(1992)*				4863	
3475	Khaisim belchir	Alteration zone: 3400m x1200m	pyrite	Magnetite	Au-0.07g/t; Cu- 0.003%		Geological mapping(1992)*				4863	
1481	Naranbulag	Stockwork: 900m x400m	Malachite, azurite, chalcopyrite	Molybdenite, pyrite, limonite	Cu-0.015-0.8%; Ag-10.2g/t		Geological mapping(1965)* ***,(1976)**	0.8 sq.km field(1976)	1 pits(1976)		2581, 3576	
2399	Solongot	Alteration zone: 1700m x170m	Lazurite, malachite	Chalcopyrite, pyrite, magnetite, hematite	Cu-0.1%; Au- 0.1g/t; Ag-4.0g/t		Geological mapping(1982)*	165 samples	295.7 m.cub		3684	
4617	Tavan iolgoi	Dykes: 150m x1.7m	Pyrite	Chalcopyrite, galkna	Cu-0.01%;		Geological mapping(1992)*				4863	
1456	Sharan khudag	Skarn: 220m x22m	Sphalerite	Malachite, chalcopyrite, pyrite	Cu-4.18%; Ag- 0.1g/t		Geological mapping(1980)*	124 samples		268m	3593	
1457	Askhat uul	Alteration zone: 530m x6m	Sphalerite	Hematite	Cu-0.02%		Geological mapping(1979)*	45 samples	175.7m.cub		3592	

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology					Deposit (1)					
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metabogenic province	Country rock	Alteration	Age of mineralization
106	Davaa	Hydrothermal-metasomatic	Zavkhan	48 56 00	97 44 00	North Mongolia	Ider	Dipression	Granite	Alkaline volcanic rocks	Permian	P2-T1 - Selenge complex	North Mongolia	Alkaline volcanic rocks		
1471	Arshaan	Metasomatic	Khubsugul	49 53 00	99 49 00	North Mongolia	Khubsugul	Dipression	Syenite, granosyenite	Carbonate rocks	V-E1 - Khesen suite	P23 - Selenge complex	North Mongolia	Carbonate rocks		P23-T1
1453	Menget nul	Skarn	Zavkhan	49 33 00	96 56 00	North Mongolia	Ider	Uplift		Limestone	Proterozoic		North Mongolia	Limestone		
574	Ulaan zavsar	Hydrothermal	Khubsugul	49 30 00	98 40 00	North Mongolia	Tuva-Mongol	Uplift	Dykes?	Terrane?	R3 - Darkhad series	D1-2 - Tes complex	North Mongolia	Terrane?		
2236	Taranin gol	Hydrothermal	Arkhangai	48 12 50	99 26 35	North Mongolia	Ider	Uplift	Granite, gabbroic diorite			P23 - Tarbagatai complex	North Mongolia	Granite, gabbroic diorite		Middle Paleozoic
4699	Solongot gol	Hydrothermal	Arkhangai	48 09 15	99 00 32	North Mongolia	Khangai	Outcrop	Granite	Limestone	lower Proterozoic	Upper Ripplean	North Mongolia	Granite		Upper Ripplean
3892	Altargana	Placer	Khubsugul	50 10 06	98 58 10	North Mongolia	Khubsugul	Dipression		Sediment	Quaternary		North Mongolia	Sediment		
3996	Buyantuin bulag	Placer	Khubsugul	49 46 50	99 24 10	North Mongolia	Khubsugul	Dipression		Sediment	QII		North Mongolia	Sediment		
4156	Dood tsutsuukh	Placer	Khubsugul	48 31 00	99 10 10	North Mongolia	Tarbagatai outcrop	Anticinal		Sediment	QIV		North Mongolia	Sediment		
3942	Jigni gol's field (18-B-VII-1)	Placer	Khubsugul	50 45 30	99 31 00	North Mongolia	Khubsugul	Dipression		Sediment	QIV		North Mongolia	Sediment		
4155	Ikhs baits	Placer	Arkhangai	48 27 20	99 50 20	North Mongolia	Tarbagatai outcrop	Horst-anticinal		Sediment	QIV		North Mongolia	Sediment		
3477	Ogboim gol	Placer	Khubsugul	50 00 00	98 39 00	North Mongolia	Khubsugul	Uplift		Sediment	QIII-IV		North Mongolia	Sediment		

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

(3b/14)

No.	Deposit name	Deposit (2)				Previous survey				Remarks			
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics		Trench and pit	Drilling	Report number
106	Davaa	Alteration zone: 500m x100m			Cu-0,05%		Prospecting work(1979)	32 samples		313.2m.cub	142.8m	3122	
1471	Arshaan	Skarn:	Tungstenite	Chalcopyrite, malachite,	Au-0,25g/t, Ag- 30g/t, Cu-0,12%		Prospecting work(1990)	50x25m field		8600m.cub	1309m	4379	
1453	Mengeti uul	Skarn: 250m x350m	Magnetite	Malachite, azurite	Cu-1,05%		Geological mapping(1976)*	12 samples				822, 2218	
574	Ulaan zavaar	Quartz veins: 250m x0,15m			Au-0,1g/t, Ag- 2,0g/t		Geological mapping(1987)*	350 samples		215.3m.cub		4428	
2236	Tairiin gol	Quartz vein: 50m x5m			Au-0,1g/t, Ag- 10g/t		Geological mapping(1982)*			213m.cub		3684	
4699	Sologot gol	Quartz vein: 50m x5m	Gold	Silver	Au-0,1g/t, Ag- 4,0g/t		Geological mapping(1981)*					3684	
3892	Allargana	Gold bearing bed: 1200m x52m	Gold		Au-549mg/m.cub	Au-26kg	Prospecting work(1991)					4746	
3996	Buyantim bulag	Gold bearing bed: 1000m x160m	Gold	Pyrite	Au-400mg/m.cub	Au-128kg	Geological mapping(1992)*			8 pits		4839	
4156	Dood Ietsuukh	Gold bearing bed: 365q.km	Gold		Au-16- 80mg/m.cub		Geological mapping(1995)*	20 samples		213.7m pits	65.5m	5035	
3942	Jigni gol's field (18-B-VII-1)	Gold bearing bed: 1.5x0.3km	Gold		Au- gold signs		Prospecting work(1993)			4m pits		4770	
4155	Ikh hats	River's valley: 140m	Gold		Au-33- 450mg/m.cub	Au-160,4kg	Geological mapping(1996)*			57m pits	210.8m	5035	
3477	Oglogim gol	Gold bearing bed: 1-2m wide	Gold		Au-0,01g/t		Geological mapping(1992)*					4863	

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location				Geology										Deposit (1)		
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenetic province	Country rock	Alteration	Age of mineralization			
3879	Suurim bulan	placer	Khubsugul	50 09 00	98 51 20	North Mongolia	Khubsugul	Uplift		Sediment	QIV		North Mongolia	Sediment					
3934	Ukhaa khem Burgaltai field	Placer	Khubsugul	51 46 00	99 36 00	North Mongolia	Khubsugul	Dipression		Sediment	QIV		North Mongolia	Sediment					
3476	Khasiin gol	Placer	Khubsugul	50 10 00	98 40 00	North Mongolia	Khubsugul	Uplift		Sediment	QIV		North Mongolia	Sediment					
3893	Khasiin gol (24-1-4)	Placer	Khubsugul	50 11 00	98 43 00	North Mongolia	Khubsugul	Dipression		Sediment	Q		North Mongolia	Sediment					
1518	Khoton gol	Placer	Khubsugul	51 14 00	99 56 00	North Mongolia	Near Khubsugul	Dipression		Sediment	N-QIV		North Mongolia	Sediment					
3880	Tsagaan bulan (27-1-5)	Placer	Khubsugul	50 08 00	98 52 40	North Mongolia	Khubsugul	Uplift		Sediment	QIV		North Mongolia	Sediment					
3933	Shar belchir	Placer	Khubsugul	51 30 00	99 31 20	North Mongolia	Khubsugul	Dipression	Granite	Sediment	QIV	D2	North Mongolia	Sediment					
1512	Sherg's	Placer	Khubsugul	51 51 00	99 47 00	North Mongolia	Tuva-Mongol	Uplift		Sediment	QIV		North Mongolia	Sediment					
455	Ika bulag (N637)	Hydrothermal	Zavkhan	48 47 00	96 37 00	North Mongolia	Khan khukhii	Uplift	Granite				North Mongolia	Granite					
1492	Khan jargalan uul	Metasomatic	Khubsugul	49 02 00	100 00 00	North Mongolia	Near Khubsugul	Dipression	Granite, granosyenite, syenite	Limestone, sandstone, conglomerate	E1 -khorul suite; E3 -Arsai suite	TT1 -Senge complex	North Mongolia	Granite, granosyenite, syenite					
3903	(71-1-5)	Hydrothermal	Khubsugul	50 09 00	98 51 00	North Mongolia	Khubsugul	Uplift		Dolomite, quartzite, limestone, shale	R -Darkhad series		North Mongolia	Dolomite, quartzite, limestone, shale					
181	Scam	Metasomatic	Khubsugul	50 11 00	100 00 00	North Mongolia	Near Khubsugul	Saenclinal	Granodiorite	Limestone	V-E1	Devonian	North Mongolia	Granodiorite					

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)				Previous survey						Reference	Remarks	
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling			Report number
3879	Suurtiin bulan	Gold bearing bed: 0.5-1.0m wide	Gold		Au-0.03-0.07g/t		Prospecting work(1990)						4746	
3934	Ukhaa khem Burgaltai field	River's valley: 30-50m wide	Gold		Au-gold signs		Prospecting work(1993)						4770	
3476	Khasiin gol	Gold bearing bed:	Scheelite	Chalcopyrite	Au-gold signs		Geological mapping(1992)*			82m pits			4863	
3893	Khasiin gol (24-1-4)	Gold bearing bed:			Au-signs		Geological mapping(1990)*			13,95m pits			4746	
1518	Khoton gol	Quartz vein: 60m x20m	Gold	Chalcopyrite, malachite, pyrite, arsenopyrite	Au(ore)-1.2g/t; Au(placer)-1.0g/m.cub		Prospecting work(1965)			32 pits			486, 1812	
3880	Tsagaan bulan (27-1-5)	Gold bearing bed:			Au-signs		Prospecting work(1988)						4746	
3933	Shar belchir	Gold bearing bed: 2-3,5m wide	Gold		Au-10-100mg/m.cub		Prospecting work(1993)						4770	
1512	Shergis	Bed:	Gold		Au-signs		Geological mapping(1941)						346	
455	Ikh bulag (No37)	Quartz vein: 650m x180m			Ag-0.2-0.5g/t		Geological mapping(1976)*						2723	
1492	Khan jargalant uul	Skarn: 90m x10m	Malachite, azurite	Magnetite	Cu-1.0%		Geological mapping(1975)*	475 samples		507,6m.cub			2660	
3903	(71-1-5)	Shale bed:60-120m wide			Cu-		Geological mapping(1989)*			147,8m			4746	
181	Scarn	Skarn: 1,5-8m wide			Cu-0.015-1.0%; Ag-5-10g/t		Geological mapping(1982)*			59,6m.cub			3649	

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology							Deposit (1)					
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metalogenic province	Country rock	Alteration	Age of mineralization		
168	Chargat	Magmatic	Zavkhan	48 35 00	98 08 00	North Mongolia	Ider		Uplift	Granodiorite, gabbro, gabbroic diorite				Lower Paleozoic	North Mongolia	Granodiorite, gabbro, gabbroic diorite		
1598	Tsetsuukh	Hydrothermal	Zavkhan	48 36 00	98 57 00	North Mongolia	Ider		Uplift	Granodiorite				PZ1 - Telmen complex	North Mongolia	Granodiorite		
1597	Tsart	Hydrothermal	Zavkhan	48 39 00	98 45 00	North Mongolia	Ider		Uplift	Granite				Middle Paleozoic	North Mongolia	Granite		
1590	Khündin davaa	Hydrothermal	Zavkhan	48 07 00	96 00 00	North Mongolia	Ider		Uplift		Porphyrite			Lower Devonian	North Mongolia	Porphyrite		
104	Khurai nuur	Hydrothermal	Zavkhan	48 55 00	97 43 00	North Mongolia	Ider		Dipression	Granosyenite porphyry, granite porphyry				P2 - T1 - Selenge complex	North Mongolia	Granosyenite porphyry, granite porphyry		
1553	Kharaai uul	Contact metasomatic	Zavkhan	49 14 00	96 42 00	North Mongolia	Ider		Uplift	Granite	Marble			Upper Proterozoic	North Mongolia	Marble		
1556	Takhiit nuur	Hydrothermal	Zavkhan	48 46 00	96 45 00	North Mongolia	Ider		Uplift	Gabbroic diorite, diorite				PR3 - Tes complex	North Mongolia	Gabbroic diorite, diorite		
4697	Solongoiin gol	Contact metasomatic	Arkhangai	48 07 32	99 05 26	North Mongolia	Khangai		Outcrop	Granite	Limestone			lower Proterozoic	North Mongolia	Limestone		
1559	Scarn	Contact metasomatic	Khubsgul	49 12 00	97 41 00	North Mongolia	Ider		Dipression	Granite	Limestone			Middle Paleozoic	North Mongolia	Limestone		
454	Sangin dalai No2	Hydrothermal-metasomatic	Khubsgul	49 12 00	99 15 00	North Mongolia	Ider		Uplift	Granite	Volcanic rocks			P2 - T1 - Selenge complex II phase	North Mongolia	Granite		
460	South part	Magmatic	Zavkhan	49 13 00	96 01 00	North Mongolia	Khan khukhii		Uplift	Granite, gabbro				PZ, MZ	North Mongolia	Granite, gabbro		
1554	Oits uul	Hydrothermal	Zavkhan	49 10 00	96 18 00	North Mongolia	Ider		Uplift	Leucocratic granite				Upper Proterozoic	North Mongolia	Leucocratic granite		Upper Proterozoic

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)					Previous survey					Reference		Remarks
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	Report number		
168	Chagat	Alteration zone:			Cu-0.02%		Geological mapping(1979)*	159 samples	1247m.cub		3569			
1598	Tsutsuukh	Quartz vein: 40m x0.1m	Malachite, chalcopyrite	pyrite	Cu-0.3-1%, Ag-0.03g/t		Geological mapping(1966)*				3711, 1760			
1597	Tsart	Quartz vein: 50m x5m	Chalcopyrite, malachite, azurite		Cu-0.42%		Geological mapping(1966)*		42m.cub(1981)		3711, 1760			
1590	Khundin davaa	Magnetic vein: 40m x0.5m	Magnetic, malachite	Chalcopyrite, pyrite	Cu-		Geological mapping(1959)*				1420			
104	Khuurai nuur	Alteration zone: 150m x35m; quartz vein: 90m x0.35m			Cu-0.03-0.08%		Prospecting work(1978)		2 digs		3122			
1553	Kharaat uul	Skarn: 1500m	Malachite, chalcopyrite	Magnetic	Cu-0.001-0.006%		Geological mapping(1977)*	30 samples	1 dig		2723			
1556	Takhilt nuur	Mineralization zone: 150m x80m	Malachite, azurite, chalcopyrite	Pyrite, magnetic, hematite	Cu-0.24%		Geological mapping(1977)*	280 samples	209, 1m.cub		2723			
4697	Solongoim gol	Skarn: 10m x3.5m	Chalcopyrite	Magnetic	Cu-0.02%		Geological mapping(1981)*				3684			
1559	Scam	Skarn: 1000m x150m	Malachite	Epidote, garnet	Cu-0.001-0.02%		Geological mapping(1977)*		315m.cub		1719, 2986			
454	Sangin dalai No.2	Quartz vein: 1-25cm			Cu-0.008-0.04%		Geological mapping(1977)*	1521 samples	421, 8m.cub	303, 8m	2651			
460	South part				Cu-0.003-0.01%		Prospecting work(1976)		1109m.cub	287m	2975			
1554	Onts uul	Mineralization zone: 220m x15m	Malachite	Pyrite	Cu-0.04-0.1%		Geological mapping(1977)*	127 samples	303, 6m.cub	16m	2723			

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No.	Deposit name	Deposit type	Location			Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metalogenic province	Country rock	Alteration	Age of mineralization
1580 No.23		Hydrothermal	Khubsagul	48 42 00	99 13 00	North Mongolia	Ider	Uplift		Metamorphic rocks	Proterozoic		North Mongolia	Metamorphic rocks		
1578 No.14		Hydrothermal	Khubsagul	48 53 00	99 31 00	North Mongolia	Ider	Uplift		Crystalline shales, marbles	Upper Proterozoic		North Mongolia	Crystalline shales, marbles		Upper Proterozoic
3993 Minjuur tolgoi		Skarn	Khubsagul	49 32 00	99 32 00	North Mongolia	Ider	Uplift	Granite	Limestone, metamorphic rocks	PR3 - Darkhad series lower bed	D2 - Tes complex	North Mongolia	Limestone, metamorphic rocks		
5332 Minjuurt		Skarn	Khubsagul	49 32 00	99 00 00	North Mongolia	Ider	Uplift	Granite	Shale, limestone	PR3 - Khar sair series	D1-2 - Numreg complex	North Mongolia	Shale, limestone		
5228 Ikh uul		Hydrothermal	Zavkhan	48 32 00	98 42 00	North Mongolia	Ider	Uplift	Granite			PZ1 - Telmen complex	North Mongolia	Granite		
3931 Occur-9		Hydrothermal	Khubsagul	51 44 50	99 46 50	North Mongolia	Khubsagul	Dipression		Green shale	Lower-Middle Riphean		North Mongolia	Green shale		
486 Occur-3		Hydrothermal	Khubsagul	49 53 00	98 16 00	North Mongolia	Tuva-Mongol	Outcrop		Limestone	Lower Cambrian		North Mongolia	Limestone		
1475 Burenkhann		Metasomatic	Khubsagul	49 49 00	99 55 00	North Mongolia	Near Khubsagul	Dipression	Granosyenite	Marblized limestone	Lower Cambrian		North Mongolia	Marblized limestone		
1589 Khuren asga uul		Hydrothermal	Zavkhan	48 08 00	96 23 00	North Mongolia	Ider	Dipression	Granite			Lower Permian	North Mongolia	Granite		
1569 Khojuulim goi		Hydrothermal	Zavkhan	48 43 00	98 16 00	North Mongolia	Ider	Uplift	Gneissose granite			Upper Proterozoic	North Mongolia	Gneissose granite		
452 Occur-7		Hydrothermal	Khubsagul	48 57 00	99 07 00	North Mongolia	Ider	Uplift	Granite	Tuffaceous sediments	P - Zaun nuur series	P2-T1 - Selenge complex	North Mongolia	Granite		
453 Occur-1		Hydrothermal	Khubsagul	49 16 00	99 15 00	North Mongolia	Ider	Uplift	Granite			Lower Paleozoic	North Mongolia	Granite		

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)				Previous survey					Reference Report number	Remarks
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit		
1580 No23	Quartz vein: 15m x0.2m	Malachite		Cu-0.03%		Geological mapping(1977)*					2651	
1578 No14	Quartz vein: 40m x0.5m	Malachite, azurite	Galena	Cu-0.003-0.05%		Geological mapping(1977)*					2651	
3993 Minjuur tolgoi	Skarn: 160m x1.3m	Copper	malachite, azurite	Cu-0.07%		Geological mapping(1993)*					4839	
5332 Minjuurt	Skarn: 650m x20m	Malachite, azurite		Cu-0.05-1.61%		Geological mapping(1972)*			65m.cub		2256	
5228 Ikh uul	Quartz vein: 10m x0.3m	Chalcopyrite	pyrite	Cu-0.05-0.3%		Geological mapping(1966)* ***, (1981)**					3711, 1760	
3931 Occur-9	Quartz vein: 20m x0.8m	Malachite, azurite, chalcopyrite		Cu-0.3%		Prospecting work(1993)					4770	
486 Occur-3	Quartz carbonate vein: 2m x0.15m	Bornite	Chalcopyrite, malachite, lazurite	Cu-0.6%; Ag-60g/t		Geological mapping(1977)*					3045	
1475 Burenkhaan	Skarn:	Chalcopyrite	Magnetite, hematite, malachite	Cu-0.5-0.64%		Regional survey(1979)					3146	
1589 khuren asga uul	Quartz vein:	Galena	pyrite	Ag-100g/t; Au-0.2g/t		Geological mapping(1981)*			219m.cub	103m	3576	
1569 kbojuulin gol	Quartz vein: 60m x5m	Galena	Fluorite	Cu-0.006%; Ag-5g/t		Geological mapping(1979)*			95m.cub		2989	
452 Occur-7	Quartz vein: 120m x0.3m			Cu-0.002%; Ag-0.0001%		Geological mapping(1977)*					2651	
453 Occur-1	Quartz vein: 60m x0.5m	Galena		Cu-0.01%; Pb-0.04%		Geological mapping(1977)*					2651	

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No.	Deposit name	Deposit type	Location			Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metabogenic province	Country rock	Alteration	Age of mineralization
1588	Burgast	Contact metasomatic	Zavkhan	48 18 00	95 05 00	North Mongolia	Tsagaan olom	Dipression	Granosyenite	Dolomite	PR3 -Tsagaan olom suite	Lower Permian	North Mongolia	Dolomite		
1462	Agar	Hydrothermal	Khubsugul	49 42 00	98 07 00	North Mongolia	Near Khubsugul	Uplift	Granite			Middle Paleozoic	North Mongolia	Granite		
1545	Bulagin uber	Metasomatic	Khubsugul	50 16 00	99 32 00	North Mongolia	Near Khubsugul	Dipression	Granite	Limestone with alcauroilite bed	V3-E1 -Bayanzurkh suite	D2 -Tes complex	North Mongolia	Granite		
571	Dargia uul	Metasomatic	Khubsugul	49 33 00	98 41 00	North Mongolia	Tuva-Mongol	Uplift	Granite	Shale	R3 -Darkhad series lower and upper beds	Upper Carboniferous	North Mongolia	Granite		
1516	Uringiin	Magmatic	Khubsugul	50 56 00	98 21 00	North Mongolia	Tuva-Mongol	Anticlinorium	Granite, granite porphyry	Limestone, green shale, marble	PR3 -Muren and Okin suites	Lower-Middle Devonian	North Mongolia	Granite, granite porphyry		
3890	Khokh davaa	Skarn	Khubsugul	50 07 30	98 52 20	North Mongolia	Khubsugul	Dipression	Diorite	Limestone	V -Bayan zurkh series	Devonian	North Mongolia	Limestone		
3992	Occur-91	Greisen	Khubsugul	49 21 30	99 20 25	North Mongolia	Ider	Dipression	Granite			P2 -Selenge complex	North Mongolia	Granite		
465	Occur-35	Hydrothermal-metasomatic	Zavkhan	48 45 00	98 26 00	North Mongolia	Ider	Uplift		Shale, dacite-rhyolite porphyry	PR3; P2		North Mongolia	Shale, dacite-rhyolite porphyry		
4618	Ubur khujirt goi	Hydrothermal	Khubsugul	50 13 10	98 39 50	North Mongolia	Near Khubsugul	Uplift		Meta-alcauroilite	R3 -Darkhad series		North Mongolia	Meta-alcauroilite		
99	Occur-8	Hydrothermal	Khubsugul	51 42 00	99 48 00	North Mongolia	Near Khubsugul	Dipression		Sandstone, limestone, shale	Vendian-Lower Cambrian		North Mongolia	Sandstone, limestone, shale		
1454	North Argaban	Contact metamorphism	Zavkhan	49 32 00	96 47 00	North Mongolia	Ider	Uplift	Granite	Marble	Upper Proterozoic	P2 -Selenge complex	North Mongolia	Granite		
1557	Shatain ovoo	Contact metasomatic	Zavkhan	48 43 00	96 11 00	North Mongolia	Ider	Uplift	Gneiss, granite-gneiss			Upper Proterozoic	North Mongolia	Gneiss, granite-gneiss		

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)			Previous survey				Reference	Remarks		
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry			Geophysics	Trench and pit
1588	Burgast	Skarn: 6000m x0.2m	Galena	Arsenopyrite, pyrite	Pb-0.5%; Zn- 0.04%		Geological mapping(1979)*				3576	
1462	Agar	Greisen zone:	Galena	Sphalerite, hematite, pyrite, chalcopyrite	Cu-0.002%; Pb- 0.002-1.0%		Geological mapping(1978)*				3045	
1545	Bulagim uber	Quartz vein: 70m x5m	Hematite, malachite, Magnetite, Pyrite.		Zn-0.02%; Mo- 0.0003%		Geological mapping(1984)*	841 samples	492.3m.cub	435.5m	3977	
571	Dargis uul	Greisen zone: 800m x350m			Nb-0.037%; Zn- 0.035%; Pb- 0.03%; Ag- 4050t; Ag-800t 0.025%		Geological mapping(1987)*	290 samples	1449.6m.cub		4428	
1516	Urmngin	Pegmatite: 19m x19m	Fergusonite, monazite, pyrochlore	Fluorite, galena, sphalerite, chalcopyrite	Tb-0.1-0.2%; Nb-18.4%		Geological mapping(1964)* ***				1750	
3890	Khokh davaa	Skarn: 2-6.2m			Au-0.005g/t		Prospecting work(1991)				4746	
3992	Occur-91	Quartz vein: 12m x0.8m			Cu-0.15%; Ag- 0.00002%		Geological mapping(1993)*				4839	
465	Occur-35	Quartz vein: 15m x0.3m			Cu-0.02%; Pb- 0.003%		Geological mapping(1976)*		38.3m.cub		2981	
4618	Ubur khujirt gol	Quartz vein (zone): 100m x0.5m	Chalcopyrite	pyrite	Cu-0.01%; Pb- 0.002%		Geological mapping(1992)*				4863	
99	Occur-8	Quartz vein:			Sn-0.02-0.1%		Geological mapping(1968)*				1827	
1454	North Argalant	Mineralization zone: 400m x26m	Sphalerite, galena	Magnetite, malachite, azurite, hematite	Cu-0.15%; Zn- 7%		Geological mapping(1981)*	219 samples	235.5m.cub		3592	
1557	Shatain ovoo	Skarn: 150m x6m	Sphalerite,	Galena	Pb-0.08%; Zn- 0.18%		Geological mapping(1977)*		183.1m.cub	30.4m	2723	

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No.	Deposit name	Deposit type	Location			Geology										Deposit (1)		
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenetic province	Country rock	Alteration	Age of mineralization		
130	Ugeidei uul	Contact metamorphism	Zavkhan	48 40 00	97 34 00	North Mongolia	Ider	Uplift	Granite	Sandstone, limestone, conglomerate	Lower Cambrian	Lower Permian	North Mongolia	Sandstone, limestone, conglomerate				
105	Ikh uul	Hydrothermal-metasomatic	Zavkhan	48 59 00	97 51 00	North Mongolia	Ider	Dipression	Granodiorite, diorite, granite, granite porphyry			PR3, P2-T1 - Selenge complex	North Mongolia	Granodiorite, diorite, granite, granite porphyry				
1464	Jinst-22	Metasomatic	Khubegul	49 35 00	98 20 00	North Mongolia	Near Khubegul	Uplift	Granite	Limestone, alcauroilite	Lower Cambrian	Middle Paleozoic	North Mongolia	Granite				
3994	Tsagaan toigoj	Hydrothermal	Khubegul	49 40 25	99 39 30	North Mongolia	Khubegul	Uplift	Granite			D2 - Tes complex	North Mongolia	Granite				
1479	Tsagaan toigoj	Metasomatic	Khubegul	49 39 00	99 40 00	North Mongolia	Near Khubegul	Dipression	Granite			D1-2 - Muren complex	North Mongolia	Granite				
3878	Khargana gol (47-4-II)	Hydrothermal	Khubegul	50 12 23	98 53 00	North Mongolia	Khubegul	Dipression	Granite	Limestone	V - Bayan zurkh series lower subaite Cambrian	Lower-Middle Jurassic	North Mongolia	Granite				
1478	Ulsan nuur	Hydrothermal	Khubegul	49 39 00	99 20 00	North Mongolia	Near Khubegul	Dipression	Granites			D1-2 - Numreg complex, J	North Mongolia	Granites				
3995	Songmot uul	Greisen	Khubegul	49 49 30	99 28 15	North Mongolia	Khubegul		Granite	Shale, limestone	R3 - Darkhad series	Jurassic	North Mongolia	Granite				
1536	Altan ovoo	Hydrothermal	Khubegul	50 17 00	98 55 00	North Mongolia	Tuva-Mongol	Anticlinorium	Granite	Shale	PR1 - Okin suite	Middle Devonian	North Mongolia	Granite				
1592	Tsagduult uul	Hydrothermal-Metasomatic	Zavkhan	48 04 00	96 14 00	North Mongolia	Ider	Uplift	Granite, gneiss			Lower-Middle Devonian	North Mongolia	Granite, gneiss				
1461	Tsagaan uul	Metasomatic	Khubegul	49 53 00	98 43 00	North Mongolia	Near Khubegul	Uplift		Meta-shale, limestone	Vendian-Lower Cambrian		North Mongolia	Meta-shale, limestone				
4698	Tsagaan nuur	Hydrothermal	Arkhangai	48 07 45	99 50 50	North Mongolia	Khangai	Outcrop	Granite	Tuffaceous conglomerate	R3 - Zavkhan series	Upper Riphean	North Mongolia	Granite				

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No.	Deposit name	Deposit (2)					Previous survey					Reference	Remarks
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling		
130	Ugeidei uul	Skarn: 100m x30m			Cu-0.8-1%; Ag-20g/t		Geological mapping(1981)*		5 digs		3576		
105	Ikh uul	Alteration zone: 250m x18,3m			Cu-0.02%; Ag-30g/t		Prospecting work(1979)	118m.cub			3122		
1464	Jinst-22	Quartz vein: 40m x2,3m	Cassiterite	Tungstenite	Sn-0.5%; WO ₃ -0.08%		Geological mapping(1978)*	331 samples	507,1m.cub		3045		
3994	Tsagaan tolgoi	Quartz body: 170m x80m			Cu-0.0048%; Mo-0.025%		Geological mapping(1992)*				4839		
1479	Tsagaan tolgoi	Greisen zone: 100m x80m	Molybdenite	Chalcopyrite, sphalerite, galena, pyrite	Cu-0.02%; Mo-0.03%		Geological mapping(1973)*	75 samples	170,5m.cub	254m	2256		
3878	Khargana gol (47-4-II)	Greisen zone: 2,4x1,1km			Mo-0,2%; Pb-0,01%; Zn-0,1%		Prospecting work(1988)				4746		
1478	Ulaan nuur	Alteration zone: 0,2 sq. km	Molybdenite	Sphalerite, galena, hematite, pyrite, magnetite	Pb-0,01%; Zn-0,02%; Mo-0,006%		Geological mapping(1973)*		475m.cub	140m	2256		
3995	Songhot uul	Greisen zone: 300m			Cu-0,01%; Mo-0,005%		Geological mapping(1992)*		137,7m.cub		4839		
1536	Altan ovoo	Granite stock: 350m x290m	Molybdenite	Cassiterite, tantalum	Mo-0,016%; Ta-0,09%; Nb-0,009%	Mo-4158t; Ta-23388t; Nb-2338t	Geological mapping(1982)*		169,6m.cub		3781		
1592	Tsagduult uul	Greisen zone: 500m x100m			Ag-4g/t; Y-0,015%; La-0,01%; Mo-0,03%		Geological mapping(1981)*				3576		
1461	Tsagaan uul	Alteration zone: 1500m x1000m	Scheelite		W-0,06%; Mo-0,009%		Geological mapping(1978)*	1698 samples	418,9m.cub	107m	1966, 3045		
4698	Tsagaan nuur	Quartz vein: 80m x0,4m			W-0,94%; Cu-0,07%		Geological mapping(1981)*		1 dig		3684		

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No.	Deposit name	Deposit type	Location				Geology						Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metallogenic province	Country rock	Alteration	Age of mineralization
1468	Khuderin	Metasomatic	Khubsugul	49 58.00	99 41 00	North Mongolia	Near Khubsugul	Dipression	Granite	Carbonate terrane	R3 -Ukhua toigoi and Arsaï suite	PZ3 -Seleng complex	North Mongolia	Granite		
1603	Tarkhin tsagaan nuur	Hydrothermal	Akhhangai	48 07 45	99 50 50	North Mongolia	Ider	Uplift	Granite	Tuffeous conglomerate	R3 -Zavkhan series	Upper Riphean	North Mongolia	Granite		
1513	Ikh bekhirim gozgor	Hydrothermal	Khubsugul	51 42.00	99 49 00	North Mongolia	Near khubsugul	Dipression		Sandstone, shale	PR3 -Okim suite		North Mongolia	Sandstone, shale		
100	Occur-25	Hydrothermal	Khubsugul	51 26.00	99 54 00	North Mongolia	Near Khubsugul	Dipression	Granite	Metamorphic rocks	Vendian-Lower Cambrian	Lower Paleozoic	North Mongolia	Granite		
451	Occur-21	Hydrothermal	Khubsugul	48 44.00	99 12 00	North Mongolia	Ider	Uplift	Granite			Lower Paleozoic	North Mongolia	Granite		
466	Bugat gol	Metasomatic	Khubsugul	49 16.00	98 45 00	North Mongolia	Ider	Dipression	Granite porphyry	Marblized limestone	Vendian-Lower Cambrian	Lower-Upper Permian	North Mongolia	Granite porphyry		
1452	Tsakhir toigoi	Metamorphic	Zavkhan	49 36.00	96 09 00	North Mongolia	Ider	Uplift		Shale, sandstone	PR3 -Burgas gol suite		North Mongolia	Shale, sandstone		
1482	Tsagaan muruu	Contact metasomatic	Khubsugul	49 31.00	99 44 00	North Mongolia	Near Khubsugul	Dipression	Granite	Limestone	E1 -Kjug series	D1-2 -Numeg complex	North Mongolia	Granite		
1473	Khuren chuluu	Metamorphic	Khubsugul	49 50.00	99 31 00	North Mongolia	Near Khubsugul	Dipression		Tuff, shale, sandstone	E1 -Sarkhai suite		North Mongolia	Tuff, shale, sandstone		
1469	Ore No 107	Metamorphic	Khubsugul	49 56.00	99 31 00	North Mongolia	Near Khubsugul	Dipression		Shale, sandstone with thin dolomite beds	R3-V -Darkhad series		North Mongolia	Shale, sandstone with thin dolomite beds		
5346	Khandin davaa	Hydrothermal	Zavkhan	48 07 00	96 00 00	North Mongolia	Ider	Uplift		Porphyrite	D1 -Bor nuur series		North Mongolia	Porphyrite		
1514	Khoron gol	Hydrothermal	Khubsugul	51 25.00	99 56 00	North Mongolia	Near Khubsugul	Dipression		Quartzite, limestone	PR3 -Khordul series		North Mongolia	Quartzite, limestone		

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)				Previous survey				Reference	Remarks	
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Grochemistry	Geophysics			Trench and pit
1468	Khudectin	Alteration zone: 3km	Tungstenite	Pyrite	Mo-0.3%; W-0.35%; Ag-3.8g/t		Prospecting work(1989)	654 samples	4 digs		4379	
1463	Terkhim tsagaan nuur	Quartz vein: 80m x40m	Tungstenite		Zn-0.14%; Au-0.1g/t; Ag-4g/t		Geological mapping(1982)*		26.5m.cub		3684	
1513	lkh belchrim gozgor	Quartz vein: 10m x0.1m	Limonite, malachite, galena		Zn-0.28%; Ga-1%; W-0.06%		Geological mapping(1968)*	400 samples			1827	
100	Oocur-25	Quartz-tourmaline vein: 3km			Cu-0.1%; Mo-0.025%		Geological mapping(1968)*				1827	
451	Oocur-21	Pegmatite: 70m x0.8m			Cu-0.002%; W-0.01%		Geological mapping(1977)*				2651	
466	Buga gol	Skarn: 15m x2m			W-0.05%; Zn-0.02%		Geological mapping(1976)*		95.9m.cub		2981	
1452	Tsakhir togoi	Quartzite lenticular body: 300m x50m	Magnetite, hematite		Cu-0.02%; Zn-0.05%		Geological mapping(1981)*		141.9m.cub		3592	
1482	Tsagaan nuruu	Skarn: 40m x20m	Magnetite		Magnetite-40%		Geological mapping(1973)*				2256	
1473	Khuren chuluut	Quartz-hematite bed: 400m x12m	Magnetite, hematite				Geological mapping(1969)*		2 digs		1914	
1469	Ore No107	Iron lenticular body: 1000m x20m	Magnetic, hematite	Limonite	Fe-58.36%; Mn-0.04%; V-0.01%		Geological mapping(1968)*; (1982)*		128m.cub (1982)		1914, 3642	
5346	Khundim davaa	Magnetite vein: 40m x0.5m	Magnetite				Geological mapping(1959)*				1420	
1514	Khonon gol		Magnetite	Chalcopyrite, malachite, pyrite	MgO-2.08%; FeO-24.87%		Geological mapping(1946)*				486	

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology						Deposit (1)				
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenetic province	Country rock	Alteration	Age of mineralization
146	khaluun usuii gol	Contact metamorphism	Khubs gul	48 33 37	99 55 15	North Mongolia	Ider	Uplift		Marbled limestone, gneiss	Lower Proterozoic		North Mongolia	Marbled limestone, gneiss		
1593	Urtiin under	Hydrothermal	Zavkhan	48 20 00	97 11 00	North Mongolia	Ider	Uplift	Granodioritic			Lower Paleozoic	North Mongolia	Granodiorite		
147	Terkhim gol	Hydrothermal	Arkhangai	48 05 00	99 18 00	North Mongolia	Ider	Uplift	Anorthositic			Lower Paleozoic	North Mongolia	Anorthositic		
1562	Telmen	Hydrothermal	Zavkhan	48 41 00	97 40 00	North Mongolia	Ider	Uplift		Limestone	Lower Cambrian		North Mongolia	Limestone		
1564	Tosontsengel	Hydrothermal	Zavkhan	48 48 00	98 04 00	North Mongolia	Ider	Uplift		Limestone	Lower Cambrian		North Mongolia	Limestone		
1560	Soriant uul	Hydrothermal	Zavkhan	48 41 00	97 32 00	North Mongolia	Ider	Uplift		Limestone	Lower Cambrian		North Mongolia	Limestone		
144	Salbart	Sedimentary-metamorphogenic	Arkhangai	48 18 06	99 49 15	North Mongolia	Ider	Uplift	Amphibolitic			Lower Paleozoic	North Mongolia	Amphibolitic		
1605	Ultiin gol	Hydrothermal	Arkhangai	48 00 00	99 50 20	Mongol-Ubur baykal	Khangaigai	Dipression		Schistized sandstone	R2-Zaigai series		North Mongolia	Schistized sandstone		
1537	No57	Hydrothermal	Khubs gul	50 17 00	98 57 00	North Mongolia	Tuva-Mongol	Uplift	Granite	Shale	PR3-Okim suite	Lower-Middle Devonian	Tuva-Mongol	Granite		
1463	No33	Metasomatic	Khubs gul	49 38 00	98 45 00	North Mongolia	Near Khubs gul	Uplift	Granitic	Meta-sedimentary rocks	Vendian-Lower Cambrian	Middle Paleozoic	North Mongolia	Meta-sedimentary rocks		
1515	No25	Hydrothermal	Khubs gul	51 01 00	98 53 00	North Mongolia	Tuva-Mongol	Uplift		Shale	PR3-Okim suite		North Mongolia	Shale		
1563	No22	Hydrothermal	Zavkhan	48 55 00	98 50 00	North Mongolia	Ider	Uplift	Intrusion?	Efusive rocks	Lower Permian	Lower Paleozoic	North Mongolia	Intrusion?		

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)					Previous survey				Reference	Remarks
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit		
146	Khaluun usniin gol	Skarn	Magnetite	Hematite	FeO-11.25%; Cu-0.005%		Geological mapping(1982)*		32.6m.cub		3684	
1593	Urtiin under	Magnetite vein: 120m x1.0m	Magnetite	Hematite			Geological mapping(1965)* ***				1755, 2218	
147	Terkhün gol	Magnetite vein: 100m x1.5m	Magnetite		Cu-0.06%; Zn- 0.05%; Fe- 29.64%		Geological mapping(1982)*				3684	
1562	Telmen	Siderite vein:100m x3m	Siderite		Cu-0.02%; Zn- 0.01%; Fe-10%		Geological mapping(1977)*				2218, 1751	
1564	Tosomsengel	Siderite lenticular body: 10m x3.0m	Siderite		Siderite-3-10%		Geological mapping(1977)*				1751, 2981	
1560	Soraant uul	Skarn: 1000sq.m	Siderite		Mn-0.1%; Zn- 0.01%; Cu- 0.02%		Geological mapping(1976)*	10 samples			2218, 1751	
144	Saibart	Shale lenticular body:70m x7m	Magnetite		Cu-0.003%; Fe- 0.6%		Geological mapping(1982)*				3684	
1605	Urtiin gol	Magnetite lenticular body: 50m x15m	Magnetite		Cu-0.01%; FeO- 8.1%		Geological mapping(1982)*				3684	
1537	No57	Shale beds:0- 15m	Magnetite		Fe-14.2%		Geological mapping(1964)* ***				1756	
1463	No33	Quartzite bed: 50m x1m	Magnetite, hematite	Chalcopyrite	FeO-40%		Geological mapping(1978)*				3045	
1515	No25	Shale bed:100m	Magnetite		Magnetite-20%		Geological mapping(1964)* ***				1756	
1563	No22	Magnetite lenticular body: 20m x5m	Magnetite		Magnetite-4-8%		Geological mapping(1974)*				2981, 1751	

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology					Deposit (1)					
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenetic province	Country rock	Alteration	Age of mineralization
1460 No.11	Hydrothermal		Khubsugul	49 25 00	97 24 00	North Mongolia	Near Khubsugul	Uplift	Granite			P2-T1 -Selenge complex	North Mongolia	Granite		
1459 No.7	Contact metamorphic		Khubsugul	49 41 00	97 39 00	North Mongolia	Near Khubsugul	Uplift	Granosyenitic	Limestone	Upper Proterozoic	P2-T1 -Selenge complex	North Mongolia	Granosyenitic		
1579 Nergui	Magmatic		Khubsugul	48 47 00	99 58 00	North Mongolia	Ider	Uplift	Gabbro, diorite			Middle Paleozoic	Tuva-Mongol	Gabbro, diorite		
4696 Must uul	Hydrothermal		Arkhangai	48 07 15	99 21 00	North Mongolia	Khangai	Outcrop	Anorthositic		Upper Proterozoic		Tarbagatai	Anorthositic		Proterozoic
1455 No.30	Metasomatic		Zavkhan	49 31 00	96 43 00	North Mongolia	Ider	Uplift	Granite	Marble	Upper Proterozoic	P2 -Numreg complex	North Mongolia	Granite		Upper Permian
3930 Occur-5	Hydrothermal metamorphic		Khubsugul	51 52 00	99 43 00	North Mongolia	Khubsugul	Depression		Green shale, serpentinitic	R1-2, V-E1		North Mongolia	Green shale, serpentinitic		
1595 Ider	Contact metamorphic		Zavkhan	48 15 00	97 20 00	North Mongolia	Ider	Uplift	Granite	Limestone	Upper Proterozoic	Lower-Middle Devonian	North Mongolia	Granite		Lower-Middle Devonian
1552 Jansen gol	Magmatic		Zavkhan	49 15 00	96 50 00	North Mongolia	Ider	Uplift	Granite	Gneiss, serpentinitic	Upper Proterozoic	Lower Cambrian	North Mongolia	Granite		Upper Proterozoic
148 Jargalant	Hydrothermal		Arkhangai	48 34 40	99 14 45	North Mongolia	Ider	Uplift	Anorthositic, gneiss			Lower Paleozoic	North Mongolia	Anorthositic, gneiss		
2212 Upper Saibartai	Hydrothermal		Arkhangai	48 21 22	99 49 15	North Mongolia	Ider	Uplift	Granite gneiss			Lower Proterozoic	North Mongolia	Granite gneiss		
1601 Darkhan ulaan davaa	Hydrothermal		Arkhangai	48 09 18	99 20 40	North Mongolia	Ider	Uplift	Gabbro-anorthositic, gabbro-diorite			Lower Proterozoic	North Mongolia	Gabbro-anorthositic, gabbro-diorite		
1542 Beltesim gol	Hydrothermal		Khubsugul	50 26 00	99 20 00	North Mongolia	Near Khubsugul	Depression	Diorite			Middle Carboniferous	North Mongolia	Diorite		

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

(11b/14)

No.	Deposit name	Deposit (2)				Previous survey				Reference	Remarks	
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics			Trench and pit
1460	No11	Quartz vein:	Magnetite				Geological mapping(1978)*				3041	
1459	No7	Skarn, 30m x5m	Magnetite, hematite	Garnet	Zn-0.03%; Mn-0.3%; Mo-0.05%		Geological mapping(1979)*				3041	
1579	Nergui	Pegmatite: 10m wide	Magnetite		Cu-0.1%; Fe-1.0%		Prospecting work(1965)				1812	
4696	Must uul	Magnetite zone: 50m x20m	Magnetite	Iron oxid. magnetic pyrites	Fe-21.36%; Cu-0.002%; Mn-0.02%		Geological mapping(1982)*				3684, 1831	
1455	No30	Magnetite lenticular body: 60m x12m	Magnetite	Fluorite	Ca-F2-4.37%; Fe-60%		Geological mapping(1981)*		51.6m.cub		3592	
3930	Oxcur-5	Quartz vein: 100m x10m	Siderite, hematite	Malachite, azurite, covellite	Cu-0.03%; Zn-0.01%; Cr-0.15%		Prospecting work(1993)*		3 digs		4770	
1595	Ider	Skarn: 10m x10m	Magnetite	Azurite, cuprite	Zn-0.2%; Cu-0.02%		Geological mapping(1964)*				1755	
1552	Jansen gol	Magnetite lenticular body: 40m x2.7m	Magnetite, hematite	Chromite, malachite, chalcopyrite	Fe-49.0%		Geological mapping(1977)*	13 samples	326.7m.cub	40.7m	2723	
148	Jargalant	Quartz vein: 10m x3m	Hematite		Fe-24.24%; Cu-0.003%		Geological mapping(1982)*				3684	
2212	Upper Salbantai	Hematite lenticular body: 20m x3m	hematite		Fe2O3-10.91%		Geological mapping(1981)*				3684	
1601	Darkhan ulaan davaa	Magnetite vein: 2m x60m	Magnetite		Fe-19.23%; Cu-0.003%		Geological mapping(1982)*		3 digs		3684	
1542	Beltesin gol	Magnetite vein: 20m x0.8m	Magnetite				Geological mapping(1953)*				609	

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metaogenic province	Country rock	Alteration	Age of mineralization
143	Bayasgalan uul	Hydrothermal	Arkhangai	48 00 48	99 25 55	North Mongolia	Ider	Uplift	Anorthosite			Lower Proterozoic	North Mongolia	Anorthosite		
4695	Bayan uul	Hydrothermal	Arkhangai	48 09 18	99 20 40	North Mongolia	Khangai	Outcrop	Gabbro-anorthositic			Lower Proterozoic	North Mongolia	Gabbro-anorthosite		Lower Proterozoic
1480	West Mandal uul	Hydrothermal	Khubsugul	49 37 00	99 21 00	North Mongolia	Near Khubsugul	Dipression		Acid volcanic rocks	P1-2 -Bugsein gol suite		North Mongolia	Acid volcanic rocks		Upper Permian
3905	Altargana gol	Hydrothermal	Khubsugul	50 18 45	98 55 00	North Mongolia	Khubsugul	Dipression	Granite	Green shale	Riphean	Middle Devonian	North Mongolia	Green shale		
1729	Tsagaan khonkh	Metasomatic	Arkhangai	48 22 00	99 50 00	North Mongolia	Ider	Uplift	Granite, quartz porphyry			Middle Riphean	North Mongolia	Granite, quartz porphyry		
175	Khukh chuluut	Magmatic	Khubsugul	50 00 00	99 58 00	North Mongolia	Near Khubsugul	Dipression		Carbonate and metamorphic rocks	V-E1 -Khesen and Khordul suite; R3 -Darkhad series		North Mongolia	Carbonate and metamorphic rocks		
1549	Khagin nuur	Magmatic	Khubsugul	50 14 00	99 35 00	North Mongolia	Near Khubsugul	Dipression	Nepheline syenite			Lower-Middle Devonian	North Mongolia	Nepheline syenite		
1544	Serkh uul	Magmatic	Khubsugul	50 23 00	99 35 00	North Mongolia	Near Khubsugul	Dipression	Syenite	Limestone	V-E1 -Bayanzurkh suite	Lower Permian-Lower Triassic	North Mongolia	Syenite		
1550	West Mankhan	Magmatic	Khubsugul	50 06 00	99 55 00	North Mongolia	Near Khubsugul	Dipression	Nepheline syenite			D1-2 -Ujig gol massive	North Mongolia	Nepheline syenite		
1522	Dund Ihem gol	Magmatic	Khubsugul	50 43 00	99 49 00	North Mongolia	Near Khubsugul	Dipression	Alkaline granite			Middle Carboniferous	North Mongolia	Alkaline granite		
178	Burenkhaan	Magmatic	Khubsugul	49 50 00	99 58 00	North Mongolia	Near Khubsugul	Dipression		Limestone	V-E1 -Khesen and Khordul suite		North Mongolia	Limestone		
1477	Marganese No26	Sedimentary	Khubsugul	49 42 00	99 58 00	North Mongolia	Near Khubsugul	Dipression		Clay schist, aluroilite	E1 -Khordul suite		North Mongolia	Clay schist, aluroilite		

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

(12b/14)

No.	Deposit name	Deposit (2)					Previous survey					Reference	Remarks
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling		
145	Bayasgalan uul	Magnetite lenticular body: 10m x1m	magnetite	Hematite, iron hydro-oxide	Fe-14,08%; Cu- 0,005%		Geological mapping(1982)*					3684	
4695	Bayan uul	Magnetite vein: 100m x15m	Magnetite	Hematite, iron oxide	Fe-19,23%; Cu- 0,005%		Geological mapping(1982)*					3684	
1480	West Mandal uul	Magnetite vein: 5m x0,2m	Magnetite		Fe		Geological mapping(1973)*					2256	
3905	Allargana gol	Quartzite body: 1600m x40m			W-0,05%		Prospecting work(1991)					4746	
1729	Tsagaan klonkh	Silicification zone:2000m x250m	Bismuthine		Cu-0,03%; Ag- 18,6g/t; Au- 0,2g/t		Geological mapping(1982)*		573,2m.cub			3684	
175	Khukh chiluit	Stock: 1,6 sq.km	Nepheline		Nepheline-20%		Geological mapping(1982)*					3642	
1549	Khagin nuur	Stock: 0,9 sq.km	Foyait		Pb-0,002%; Fe1,21%		Geological mapping(1984)*		5634,8m.cub	315,4m		3977	
1544	Sekh uul	Stock: 2,75 sq.km	Foyait, Juvite		Al-22,3%		Geological mapping(1985)*					3977	
1550	West Mankhan	Stock: 25 sq.km	Nepheline	Topaz	Al-		Geological mapping(1968)*					1914	
1522	Dund khem gol	Foyait zone: 3000m x200m	Foyait		Al-20,9%; Nb- 0,02%	Al-33,7 Million ton	Geological mapping(1965)* ***; (1987)*	514 samples(1987)	71,8m.cub(1987)			1756, 4286	
178	Burekhaan	Syenite stock: 6,2 sq.km	Nepheline		Al-20,9%		Geological mapping(1982)*					3642	
1477	Manganese No.26	Alteration zone: 2600m x98m	Pistolmelane		Mn-8,8%; Ni- 0,005%		Geological mapping(1980)* (1981)*		2 digs(1980); 395m.cub(1981)	284m (1981)		3642, 4040	

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No.	Deposit name	Deposit type	Location			Geology				Deposit (1)						
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenetic province	Country rock	Alteration	Age of mineralization
1591	Khag nuur	Sedimentary	Zavkhan	48 04 00	96 30 00	North Mongolia	Ider	Dipression		Sandstone, aleurolite	Lower Cambrian		North Mongolia	Sandstone, aleurolite		
1566	kheteimi	Hydrothermal-metasomatic	Khubsugul	50 04 00	99 25 00	North Mongolia	Near Khubsugul	Dipression	Granite	Limestone	E1 -Minjif suite	Lower-Middle Devonian	North Mongolia	Granite		
1458	Baga ich jamaat	Hydrothermal	Zavkhan	49 46 00	97 06 00	North Mongolia	Near khubsugul	Uplift		Limestone	Vendian-Lower Cambrian		North Mongolia	Limestone		
3932	Occur-3 (8-A-IV.4)	Hydrothermal	Khubsugul	51 52 35	99 41 40	North Mongolia	Khubsugul	Dipression		Serpentine, carbonate rocks	Vendian		North Mongolia	Serpentine, carbonate rocks		
1467	No38a	Alluvial	Khubsugul	49 24 00	98 03 00	North Mongolia	Near Khubsugul			Clay sand	QIV		North Mongolia	Clay sand		
1466	No 25a	Alluvial	Khubsugul	49 29 00	98 22 00	North Mongolia	Near Khubsugul			Sand, clay	QIV		North Mongolia	Sand, clay		
1465	No18a	Alluvial-proluvial	Khubsugul	49 33 00	98 24 00	North Mongolia	Near Khubsugul	Uplift		Clay sand	QIII-IV		North Mongolia	Clay sand		
1485	Shine-Ider	Magmatic	Khubsugul	48 55 00	99 40 00	North Mongolia	Ider	Uplift	Gneiss, migmatitic, amphibolite			Proterozoic	North Mongolia	Gneiss, migmatitic, amphibolite		
1539	Tsokhio	Hydrothermal	Khubsugul	50 36 00	99 19 00	North Mongolia	Near Khubsugul	Dipression		Limestone	Lower Cambrian		North Mongolia	Limestone		
1476	No21	Sedimentary	Khubsugul	49 46 00	99 53 00	North Mongolia	Near khubsugul	Dipression		Limestone with shale beds	E1 -Khordul suite		North Mongolia	Limestone with shale beds		
1474	Vanadium (No 18)	Sedimentary	khubsugul	49 49 50	99 50 00	North Mongolia	Near Khubsugul	Dipression	Granite, granodiorite	Limestone, carbonate rocks	V-E1 -Khesen suite; E1 -Khordul suite	PZ2	North Mongolia	Limestone, carbonate rocks		
1483	Buyant (No83)	Sedimentary	Khubsugul	49 44 00	99 47 00	North Mongolia	Near khubsugul	Dipression	Granite	Dolomite, limestone, aleurolite, shale	V-E1 -Khesen suite	Upper Paleozoic	North Mongolia	Dolomite, limestone, aleurolite, shale		

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit (2)				Previous survey					Reference	Remarks	
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit			Drilling
1591	Khag nuur	Manganese bed: 2000m x1000m			Mn-36,98%	Mn-3.4 Million ton	Geological mapping(1981)*			120m.cub	37m	3576	
1566	Aheteni	Mineralization zone: 25m x10m	(Cyrtoite)?		Li-0.01%; Nb-0.02%;La-0.03%		Geological mapping(1969)*					1914	
1458	Bagajkh jamaat	Pegmatite: 5m	Spodumene		Li-1%; Be-0.3%; Nb-0.05%		Geological mapping(1979)*					3041	
3932	Occur. 3 (S-A-IV-4)	Serpentinite bed:			Ni-1%; Cr-0.2%; Co-0.007%; Cu-0.005%		Geological mapping(1993)*					4770	
1467	No.38a	Ilmenite bed: 9000m x3000m	Ilmenite		Ilmenite-2800g/m.cub		Geological mapping(1977)*			262.3m		3045	
1466	No. 25a	Ilmenite bed: 520m	Ilmenite		Ilmenite-7500g/m.cub		Geological mapping(1977)*			313.5m		3045	
1465	No18a	Ilmenite bed: 450m	Ilmenite		Ilmenite-2200g/m.cub		Geological mapping(1977)*			336.8m		3045	
1485	Shine-ider	Pegmatite dyke: 90m x4m	Beryl		Be-		Prospecting work(1966)					1814, 2283	
1539	Tsokhio	Quartz-calcite veins: 25m x0.08m			V-3.4%; Cr-2.5%; As-6.9%		Geological mapping(1933)* ***, (1953)**			130m.cub(1953)		609, 44	
1476	No21	Silicification zone:1500m x200m			V-0.6%; Mo-0.02%; Cu-0.01%		Geological mapping(1982)*			390m.cub		3642	
1474	Vanadium (No 18)	Silicification bed:1800m x81m	Vanadium		V-0.17%	V-14260.4t	Geological mapping(1982)*			1677m.cub		3642, 4040	
1483	Buyant (No83)	Vanadium bearing shale bed: 800m x70m	Vanadium	Phosphorite	V-0.23%; Ba-1%; Mo-0.002%		Geological mapping(1982)*			787.5m.cub		3642	

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

No.	Deposit name	Deposit type	Location			Geology							Deposit (1)			
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metabogenic province	Country rock	Alteration	Age of mineralization
48	Mungesh	Hydrothermal-metasomatic	Khubsugul	50 37 00	99 24 00	North Mongolia	Near Khubsugul	Graben		Limestone	Upper Cambrian		North Mongolia	Limestone		
5003	Tsagaan chuluut	Contact metasomatic	Khubsugul	50 31 00	99 46 00	North Mongolia	Near khubsugul	Dipression	Granite	Limestone, marble	E1 -Khorolul suite	Middle Devonian	North Mongolia	Limestone, marble		Middle Devonian
3891	Altan boom	Hydrothermal	Khubsugul	50 17 32	98 56 00	North Mongolia	Khubsugul	Uplift	Leucocratic granite	Shale	Middle Riphean	Lower-Middle Jurassic	North Mongolia	Leucocratic granite		

Table A-3 List of mineral occurrences, and geochemical anomalies in western part of the central-north area, Mongolia

(14b/14)

No.	Deposit name	Deposit (?)				Previous survey					Reference		Remarks
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	Report number	
48	Mungesh	Quartz-calcite vein: 30m		V-			Geological mapping(1933)					44	
5003	Tsagaan chuluut	Skarn: 0.3m wide Schellite		W-0.1%			Geological mapping(1986)*			100m		3977	
3891	Altan boom	Ore body: 300m x200m		Ta-		Ta 1700t; Nb-1610t	Geological mapping(1991)*					4746	

Previous survey (geology)

"-1:10 000 scale prospecting work; *-1:50 000 scale geological mapping; **-1:200 000 scale geological mapping; ***-1:500 000 scale geological mapping; ****-1:1 000 000 scale geological mapping

Table A-4 List of topographic maps of the survey area

Index No.	Map No.	Original title of the map (in Mongolian or Russian)	Scale	Published Year
1-1	M-47-A	Баянзурх	1:500,000	unknown
1-2	M-47-B	Тосонцэнгэл	1:500,000	unknown
1-3	M-47-Б	Хөвсгөлдэлай	1:500,000	unknown
1-4	M-47-Г	Мөрөн	1:500,000	unknown
1-5	M-48-A	Слюдянка	1:500,000	unknown
1-6	M-48-B	Булган	1:500,000	unknown
1-7	M-47-69	Г. Хуху Дэбсэг Обо	1:100,000	1948
1-8	M-47-81	Нарани Обо	1:100,000	1948
1-9	M-47-93	Мурэн	1:100,000	1948
1-10	M-47-119	Цэцэрлиг Сомон	1:100,000	1949
1-11	M-47-120	Озшарга-Нур	1:100,000	1949
1-12	M-48-61	Аригыйи Дуганг	1:100,000	1948
1-13	M-48-62	Цулун	1:100,000	1949
1-14	M-48-74	Тэшиг Сомон	1:100,000	1948
1-15	M-48-100	Цонхолол Сомон	1:100,000	1947
1-16	M-48-101	Хангал Сонон	1:100,000	1948
1-17	M-48-109	Нарингин Хурэ	1:100,000	1949
1-18	M-48-110	Г. Аршантуин Обо	1:100,000	1949
1-19	M-48-111	Булганы Нуруу	1:100,000	unknown
1-20	M-48-112	Булган	1:100,000	1942
1-21	M-48-113	Г. Ундур-Ула	1:100,000	1948
1-22	M-48-121	Оз. Ихэ Цаган-Нур	1:100,000	1949
1-23	M-48-134	Улцзэйтү Сомон	1:100,000	1949
1-24	M-48-135	Абзог Сомон	1:100,000	1947
1-25	M-48-137	Зуунтуруу Бригад	1:100,000	unknown

Table A-5 List of geological maps (with the reports) of the survey area

Index No.	Report No.	Original title of the map (in Mongolian or Russian)	Name of the area (in English)	Scale	Published Year	Remarks*
2-1	non.	Geological Map of Mongolia scale 1:1,000,000	Geological Map of Mongolia	1:1,000,000	unknown	2 pieces (M-47, M-48)
2-2	non.	Геологическая Карта Северной Монголии	Geological Map of Northern Mongolia	1:500,000	1987	1 piece
2-3	non.	Карта Полезных Ископаемых Центральной И Восточной Монглии	Mineral Map of Mongolia	1:500,000	1986	6 pieces (M-47-A, B, -B, -Г, M-48-A, -B)
2-4	402	Геологическая Карта Района Реки Желтуры/Ацзаргайн-гол/Селенгински И Аймак МН.Р.	Z(h)elter river	1:200,000	1943	1 piece
2-5	1725	Геологическая Карта. Карта Полезных Ископаемых	South Khubsgul	1:200,000	1967	2 pieces (M-47-XVII)
2-6	1811	Геологическая Карта. Карта Полезных Ископаемых	Selenge river	1:200,000	1968	2 pieces
2-7	1820	Геологическая Карта И Карта Полезных Ископаемых	Khangal and Orkhontuul	1:200,000	unknown	2 pieces (M-48-XXVII)
2-8	1821	Геологическая Карта	Southeast part of Khubsgul	1:200,000	1967	1 piece (M-47-58, -59, -70, -71)
2-9	1960	Карта Полезных Ископаемых: Бассейна Нижнего Течения Р. Толы	Tuul river	1:200,000	1972	2 pieces (M-48-XXVII, -XXXIII, -XXXIV)
2-10	2035	Геологическая Карта И Карта Полезных Ископаемых	Bulgan	1:200,000	1972	1 piece (M-48-XX, -XXVI, -XXVII, -XXXII, -XXXIII)
2-11	2043	Геологическая Карта	Orkhon-Selenge river	1:200,000	1974	2 pieces (M-47-XXX, M-48-XXV, -XXVI)
2-12	2256	Карта Полезных Ископаемых	Muren and Tsetserleg	1:200,000	1975	4 pieces (M-47-XXII, -XXVII, -XXXI, -XXXII)
2-13	2283	Геологическая Карта И Карта Полезных Ископаемых	North Khangai	1:200,000	1974	1 piece (M-47-XXXVIII, -XXXIX, XXXV, -XXXVI, M-48-XXXI)
2-14	2575	Геологическая Карта Совмещенная С Артой Полезных Ископаемых	Dashinchilen	1:200,000	1976	6 pieces (L-48-III, M-48-XXXII, -XXXIII, Section)
2-15	2660	Геологическая Карта И Карта Полезных Ископаемых	Muren	1:200,000	1976	5 pieces (M-47-XVII, -XXIII, -XXIV)
2-16	2765	Геологическая Карта И Карта Полезных Ископаемых	Ulzeit	1:200,000	1978	4 pieces (M-48-XXX I, -XXX II)
2-17	2982	Геологическая Карта И Карта Полезных Ископаемых	Tarvagatai	1:200,000	1979	3 pieces (M-48-XIX)
2-18	3156	Геологическая Карта И Карта Полезных Ископаемых	Teshig	1:200,000	unknown	1 piece (M-48-XX, -XIV)
2-19	3228	Геологическая Карта	Under-ulaan	1:200,000	1981	1 piece (M-47-XXXV, -XXXVI)
2-20	3624	Геологическая Карта И Карта Полезных Ископаемых	Zhelter	1:200,000	1982	5 pieces (M-48-XV, -XVI, -XXI, -XXII)
2-21	4838	Геологийн Зураг, Ашигт Малтмал, Туун Ий Тархалтын Зуу Тогтлын Зураг	Erdenebulgan	1:200,000	unknown	9 pieces (M-47-XVII, -XVIII, -XXIV): in Mongolian
2-22	4862	Геологийн Зураг, Ашигт Малтмал, Туун Ий Тархалтын Зуу Тогтлын Зураг	Tavt	1:200,000	unknown	8 pieces (M-48-VII, -XIII): in Mongolian
2-23	5171	Геологийн Зураг, Ашигт Малтмал, Туун Ий Тархалтын Зуу Тогтлын Зураг	Tsagaan uur	1:200,000	1998	7 pieces (M-47-V, XI, -VI, X II): in Mongolian

* Descriptions of all the maps are written in Russian, except for denoted ones.

Table A-5 List of geological maps (with the reports) of the survey area

Index No.	Report No.	Original title of the map (in Mongolian or Russian)	Name of the area (in English)	Scale of the map	Published Year	Remarks*
2-24	63	(2) Вториичные Ореолы Рассеяния (Cu, Ba, Zr, Mo) (3) Вторичные Ореолы Рассеяния (Zn, Pb, U, W, Li)	Mogoin gol	1:50,000	unknown	3 pieces (M-48-109-B)
2-25	1507	Схематическая Геологическая Карта а: Водораздела Рек Бургэлту-голи Бадарыйи-гол etc.	Egiingol	1:50,000	1961	6 pieces
2-26	1612	Геологическая Карта: Дзала туинског оулыт-раосновного Массива	Dzalaat	1:50,000/1:2,000	1960/1964	3 pieces
2-27	2924	Схематическая Геологическая Карта		1:50,000	unknown	1 piece (M-48-109-B)
2-28	3538	Схематическая Геологическая Карта И Полезных Ископаемых: Района Работ Эрдэнэтинской Поисковой Партии №.11	Erdenet	1:50,000	1982	1 piece
2-29	3642	(1) Геологическая Карта (2) Карта Полезных Ископаемых И Закон о мерностей Их Размещения	Burenkhan	1:50,000	1983	10 pieces (M-47-68-B, -Г; -80-A, -Б; -81-A; -80-B & -81-B)
2-30	3649	(1) Геологическая Карта (2) Карта Полезных Ископаемых И Закон о мерностей Их Размещения	Khatgal	1:50,000	1982	10 pieces (M-47-57-B; -69-A, -Б, -B)
2-31	3976	МГ и ГРП МНР Муренская Геологическая Экспедиция, Эгэйн-гольская №.10: Геологическая Карта, Карта Полезных Ископаемых И Закономерностей Их Размещения	Egiingol	1:50,000	1986	10 pieces (M-47-69-Г; -70-A, -Б; -81-B)
2-32	4403	Совместная Монголо-Советская, Геологическая Экспедиция "Дархан", Сайхана, Карта Закономерностей Размещения Полезных Ископаемых	Saikhan	1:50,000	1990	20 pieces (M-48-109-Г; -110-A, -Б, -B, -Г; -111-A, -B, -Г)
2-33	4597	Улсын Геологийн ТӨВ Геологи Шинжилгээний "Дархан" Нэгдэл Туулын Анги: Геологийн Карт, Ашигт Малтмалын Карт	Tuul	1:50,000	1991	23 pieces (M-48-125-Г; -137-A, -Б, -B, -Г; -138-A, -Б, -B, -Г; L-48-5-A, -Б, -Г)
2-34	4633	МНР, Муренская Геологическая Экспедиция, Муренская ГГС Партия №.7: Геологическая Карта, Карта Закономерностей Размещения Полезных Ископаемых	Muren	1:50,000	unknown	36 pieces (M-47-81-B, -Г; -82-A, -Б, -Г; -92-Б, -Г; -93-A, -Б, -B, -Г; -94-A, -Б, -B, -Г; -95-A, -B)
2-35	3283	Геологическая Карта: Района Эрдени туин-обо (Булган-аймак)	Erdenetiin ovoo	1:100,000	1968	2 pieces
2-36	3283	Геологическая Карта Рудной Зоны: Эр дени туин-обо (Булган-аймак)	Erdenetiin ovoo	1:10,000	1966	1 piece
2-37	4552	Ташигсий Рудный Узел: Геологическая Карта	Teshing ore node	1:100,000	1989	1 piece

* Descriptions of all the maps are written in Russian, except for denoted ones.