

# 卷 末 資 料

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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 Erdeneyn 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 metallogeny of Mongolia	1995	V. I. KOVALENKO and V. V. YARMOLYUK	Economic Geology vol.90, pp.520-529
Erdeneet 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 Kazuhiko ADACHI	Bulletin of the Geological Survey of Japan, vol.49(6), p.275-290
Fluorite deposits in Mongolia. an outline	1998	Jargalyn LKHAMSUREN and Satoshi HAMASAKI	Bulletin of the Geological Survey of Japan, vol.49(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.JARGALSAIFIAN, 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 granitooids 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.49(6), pp.249-255
Lake's island arc terrane	1996	G. BAT-ERDENE, YA. BAT-IREEDUI, O. TOMURTOGOO, A.S. GIBSHER, and Y.C. SOVETOV	Gidebook for
Migmatism and metallogenetic 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. JAMSRAJN, A.P. BERZINA, A.E. SHABOLOVSKI, 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			The World Bank/ The Government of Mongolia
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 (Mong-Okhotsk belt, Mongolian People's Republic)	1989	P.V. KOVAL, A. GOTOVSUREN, S. ARIUNBILEG 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	1998	Masahiro YAMAMOTO, Dilegijn BAT-ERDENE, Purevii ULZILKHISHIG, Yoshio WATANABE, Noboru IMAI, Yoshihei Bulletin of Geological Survey of Japan, vol.49(6), p.257-274 KAJIWARA, Nobuyori TAKEDA and Terumasa NAKAJIMA	International Geology Review, vol.39, pp.542-576
Paleozoic sedimentary basins and volcanic-arc systems of southern Mongolia: New stratigraphic and sedimentologic constraints	1997	Melissa A. LAMB and Gombosuren BADARCH	Bulletin of the Geological Survey of Japan, vol.49(6), pp.239-248
Phanerozoic felsic magmatism and related mineralization in Mongolia	1998	Ochir GEREL	Bulletin of the Geological Survey of Japan, vol.49(6), p.291-298
Preliminary study on the characteristics of Tsagaan tsakhir uul gold deposit, Bayankhongor, southern Mongolia	1998	Sereen JARGALAN and Satoshi MURAO	Bulletin of the Geological Survey of Japan, vol.49(6), p.299-308
Previous studies on the Erdenetlin ovoo porphyry copper-molybdenum deposit, Mongolia	1998	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	1998	Melissa A. LAMB and Dennis COX POWELL	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	1996	Yoji TERAOKA, Morihisa SUZUKI, Floragin TUNGALAG, Nilüdengin ICHINNOROV and Yukio SAKAMAKI	Bulletin of the Geological Survey of Japan, vol.47(9)
The central Siberia-Mongolia transect	1993	Yu. Z. ZORIN, V. G. BELICHENKO, YE. KH. Turutanov, V. M. KOZHEVNIKOV, S. V. Ruzhentsev, A.B. DERGUNOV, Geotectonics, vol.27, no.2, p.103-117 I.B. FILIPPOVA, O. TOMURTOGOO, N. ARVISBAATOR, TS. BAYASGALAN CH. BYAMBA, and P. KHOSBAYAR	Bulletin of the Geological Survey of Japan, vol.48(9), p.487-491
The discovery of late Devonian (Framennian) conodonts in the Bayanhongor area, west Mongolia	1997	Chikao KURIKOMOTO, Niidengin ICHINNOROV, Toshio KOIKE, Floragin TUNGALAG and Ukhamsuren BAYARMANDAL	Bulletin of the Geological Survey of Japan, vol.49(6), p.530-547
The peralkaline granite-related Khaldzan-Buregley rare metal (Zr, Nb, REE) deposit, western Mongolia	1995	V. I. KOVALENKO, G.M. TSARYEVA, A.V. GOREGLYAD, V.V. YARMOLYUK, V.A. TROITSKY, R.L. HERVIG, and G.L. FARMER	Journal of Geochemical Exploration, 21, pp.201-208, Elsevier Science Publishers B.V., Amsterdam- Printed in the Netherlands
The role of regional lithogeochemistry in mineral exploration	1984	Pavel V. KOVAL	Earth Science Reviews, 34, p.81-118, Elsevier Science Publishers B.V., Amsterdam
The structure and development of the Baikal rift depression	1993	Victor D. MATS	Earth Science Reviews, 34, p.81-118, Elsevier Science Publishers B.V., Amsterdam

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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, Dori DORJNAMJAA, and Jalsuugijn BADAMGARAV	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
海外資料 第105号 モンゴル人民共和国の地質鉱床	1991	金鳳鉱業事業団 資源情報センター	海外鉱業情報 月号, p
ゴビの大盆地	1984	岸本文男	地質ニュース357号, p.47-51
第8章アジア大陸のテクトニクス概説 第9章北東アジア地塊の地質概説	1979	都城秋穂(第8章) Н.П.Добрецов, Б.М.Чикоев(第9章)	岩波講座 地球科学16 -世界の地質- p 237-299
平成10年度資源開発協力基礎調査 プロジェクト選定調査報告書 モンゴル国	1999	(財)国際鉱物資源開発協力協会	
平成9年度 モンゴル国 純山開発プロジェクト評価調査 報告書	1998	(財)国際鉱物資源開発協力協会	
モンゴル・エルネット鉱山を防ぐて	1999	内藤一樹、須藤定久	地質ニュース、第534号, p.19-30
モンゴルの火成活動	1999	蟹澤謙史	地質ニュース、第534号, p.31-40
モンゴルの鉱物資源	1990	中嶋輝允	新金属工業1990年夏季号、vol.35, p.66-69
モンゴルの最近の鉱業状況-投資環境と金鉱床の開発-	1997	金鳳鉱業事業団 資源情報センター	海外鉱業情報7月号, p.105-120
モンゴルの地質と調査研究活動	1999	高橋裕平	地質調査所月報、第50巻、第4号, p.279-289
モンゴルの鉱物資源開発	1979	岸本文男	地質ニュース、第299号, p.49-55
モンゴルへの旅	1991	佐藤赳郎	地質ニュース、第438号, p.39-51
モンゴル国の鉱物資源開発 -現状と問題点-	1999	坂巻幸達	資源と素材、第115巻、第12号, p.865-870
開発途上国別経済協力シリーズ、アジア編 No. 18 -モンゴル-	1999	(財)国際協力推進協会	(財)国際協力推進協会, 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-Порфиророве месторождение в Эрдэнэтийн-Овоо (МНР) A Molybdenum-Copper Porphyry Deposit: Erdeneutu Oovo (Mongolia)	1989	С.П. Гаврилова, И.Е. Максимюк, Д. Ороолмаа S.P. Gavrilova, I.E. Maksimuk, D. Oroolmaa	The Academy of science of the USSR Mineralogy, Geochemistry and Crystallochemistry of Rare Elements pp.39
Металлогенез Монгольской Национальной Республики и Китай (Медь, Молибден) Metallogeny of the Mongolian People's Republic (Copper, Molybdenum)	1985	В.И. Сотников, М. Жамсран, А. П. Березин, А. Е. Шабаловский, Д. Гарамжай В. Д. Болд Shnicov, M. Jamsran, A.P. Berzina, A.E. Shabolovskii, D. Garanjav, D. Bold.	The Academy of science of the USSR and MPR joint research geological expedition pp.39
Металлогенез Монгольской Национальной Республики и Китай (Золото) Metallogeny of the Mongolian People's Republic (Gold)	1986	Ю.Г. Щербаков, Г.Д. Эжицама, Ю.А. Каланин, С.Р. Осинцев, Н.А. Ростяков Yu.G. Sherbakov, G. Dejidmaa, Yu.A. Kalinin, S.R. Osintsev, joint research geological expedition pp.49 N.A. Rostyakov	The Academy of science of the USSR and MPR joint research geological expedition pp.49
Медно-рудные формации МНР Copper-bearing Formation of the MPR	1985	Ответственный редактор Академии Науки В.А. Кузнецова Responsible Editor: Academician V.A. Kuznetsov	Nobosibirsk. Edited by "Nauka" Siberian branch p.1-76
С П"Эрдэнэт", 20 лет Эффективной деятельности ти и Постоянного Развития Erdenet 20 years of effective activity and stable development	1998	И.Ш. Сагаева, А. Базар I.Sh.Sataev, A.Bazar (Ed.)	Г. Эрдэнэт, Монголия Erdenet, Mongolia
О отличительные черты Средне-Иркутского озёрских гранитоидных комплексов Северо- й Монголии Distinguishing feature of the middle and late Paleozoic granitoid complexes of North Mongolia	1991	Д. Гарамжай 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
Определения южные Элементы генетической модели и Медно-Молибден-Порфироровой Рудно-Магматической системы Defining elements of genetic model for a copper-molybdenum porphyry ore-magnetic system	1991	В.И. Сотников, А.П. Березина, А.Л. Павлов, 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 геодинамических областей Ore-magnetic 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 Scienceof URSS. 961
Этапы формирования Эрдэнэтийского Молибден- и Медно-Порфирорового Месторождения (Монголия) Erdenet molybdenum-copper porphyry deposit (Mongolia)	1991	С.П. Гаврилова, И.Е. Максимюк 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

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TITLE	DATE	AUTHOR	SOURCE
Эволюция изотопного состава водорода в матическом процессе на месторождении Эрдэний-Овоо The evolution of isotope content of hydrogen in magmatic process at the Erdeneutu Ovoo deposit	1990	А.П.Березина, И.Курода, В.И.Сотников A.I.Berzina, Y.Kuroda, V.I.Sotnikov	Institute geology and geophysics of 60 yr. USSR Siberian section of Academy Science, Novosibirsk 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.Гарэм V.A.Pavlov, R.M.Yashina, D.Garam	Soviet-Mongolian geological joint expedition, IGEM of Academy Science of USSR, Moscow
Одоорогенной металлогенией Монголии Pre-orogenic metallogeny of Mongolia	1980	Е.С.Контари, Л.Е.Либарова, Т.Ганбар E.C.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

(1a/15)  
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			Age of sedimentary rocks	Metamorphic province	Country rock	Alteration	Age of mineralization
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure					
22	Tamir gol	Metamorphogenic Arhangai	47°35'54"	102°07'06"	Mongol-Ubar ba Khangai	Uplift			Paleozoic(Pz)		East Khangai		
23	Ikh zagal uul	Contact metamorphism	Bulgan	48°16'00"	104°12'45"	North Mongolia Tarat-Selenge Fault	granite		meta-shale, shale, quartzite		meta-shale, shale, quartzite		
24	Erdeneiin ovoo (Central part)	Hydrothermal	Orkhon	49°01'00"	104°08'00"	North Mongolia Tarat-Selenge Depression	granodiorite, diorite			Permian-Triassic(P2-T1)	North Mongolia granodiorite, diorite	Oxidation zone	
13	Erdeneiin ovoo and Oyuji	Stockwork	Orkhon	48°58'00"	104°12'00"	North Mongolia Orkhon-Selenge	Uplift	Intrusion <sup>a</sup>		Triassic-Jurassic(T1-T3)	North Mongolia intrusion <sup>a</sup>		
14	Erdeneiin ovoo	Stockwork	Orkhon	49°01'02"	104°07'08"	North Mongolia Orkhon-Selenge	Uplift	Intrusion <sup>a</sup>		Triassic-Jurassic(T1-T3)	North Mongolia intrusion <sup>a</sup>		
81	Khoshei gol	Metasomatic	Bulgan	48°14'00"	103°10'00"	North Mongolia Tarat-Selenge Depression			tuff breccia, porphyrite Carboniferous(C3)			North Mongolia tuff breccia, porphyritic	
82	Zaukhur 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 granitic, granodioritic	Permian-Triassic(T2-T3)	
83	Agum davaa	Hydrothermal	Bulgan	48°38'00"	103°59'00"	North Mongolia Tarat-Selenge Depression	granite		volcanogenic sedimentary rocks	Permian(P)		North Mongolia volcanogenic sedimentary rocks	
89	Mogom gol	Hydrothermal	Bulgan	49°10'00"	103°45'00"	North Mongolia Orkhon-Selenge	Dipression		trachyanandesite, andesitic porphyry, tuffaceous sandstone	Permian-Triassic-Lower Jurassic		North Mongolia trachyanandesitic, andesitic porphyry, tuffaceous sandstone	Silification, Limonitization
108	Bulagti	Metasomatic	Bulgan	49°43'00"	103°00'00"	North Mongolia Tarat-Selenge Depression						North Mongolia porphyry, tuffaceous sandstone	
109	Bayanzurkh	Contact metamorphism	Bulgan	49°45'00"	103°06'00"	North Mongolia Tarat-Selenge Depression	leucocratic granite		volcanic rocks	Upper Permian-Lower Triassic		North Mongolia leucocratic granite	
113	Khasaa bulag	Hydrothermal	Arkhангай	48°20'00"	101°06'00"	Mongol-Ubar ba Khangai	Dipression	granite				Upper Paleozoic-Lower Triassic	
114	Ider uul	Hydrothermal metasomatic	Arkhангай	48°13'00"	101°37'00"	Mongol-Ubar ba Khangai	Uplift	granite				Upper Permian-Lower Triassic	
115	Khuulen nuur	Hydrothermal metasomatic	Arkhангай	48°06'00"	101°56'00"	Mongol-Ubar ba Khangai	Uplift	granite				Upper Permian-Lower Triassic	
149	Dund gal	Sedimentary	Tub	48°12'00"	104°26'00"	Mongol-Ubar ba North Khentii	Uplift		sediment	Quaternary(QIV)		North Khentii	Sediment
150	Tsaagan gal	Sedimentary	Tub	48°14'00"	104°28'00"	Mongol-Ubar ba Khentii	Uplift		sediment	Quaternary		North Khentii	Sediment
151	Dund hanigan	Sedimentary	Tub	48°15'30"	104°30'00"	Mongol-Ubar ba Khentii	Uplift		sediment	Quaternary		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/15)

No.	Deposit name	Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Previous survey		Geophysics	Geochimistry	Geology	Prospecting work	Trench and pit	Drilling	Report number	Reference	Remarks (surveyed occurrence No.)
23	Ikh zugzag uul	Lenticular body; 6.5m x 11.8m	magnetite	hematite	Fe-42%	Fe-57million ton			Fe-1million ton	Prospecting work						1438, 2083, 1814	
22	Tamir gol	Lenticular body; 200-400m	magnetic	hematite	Fe-62%											2374, 2626, 3003	Outer of survey area
24	Erdenetüm ovoο (Central part)	Stockwork; 1350m x300m	chalcopyrite, chalcocite, chalcopyrite	malachite, azurite, covellite	Cu-0.41%; Mo-0.016%	Cu-598790; Mo-21864t				Prospecting work(1988)						1961, 3283, 1820, 1813, 3865, 4383	
33	Erdenetüm ovoο and Oyut	Stockwork; 4km x0.6km	chalcopyrite, pyrite, molybdenite	covellite, chalcocite	Cu-0.33-0.4%	Cu-1086800t				Prospecting work						961, 1820, 1813, 1947, 1993, 4069, 4565, 2083, 3283	(41)
34	Erdenetüm ovoο	Stockwork; 2.8km x1.3km	chalcopyrite, pyrite, covellite, bornite, etc.	chalcopyrite, pyrite, molybdenite	Cu-0.9%	Cu-2825000t				Prospecting work						1965, 3465	{39}
81	Khushter gol	Fracture zone; 300m x50m	chalcopyrite	Pyritic	Cu-					Geological mapping(1960)***	41 samples					1500	{3}
82	Zauukhin gol	Stock Dykes; 1.2km x1.5km	chalcopyrite, pyrite, molybdenite	galena, sphalerite	Cu-0.006-0.2%; Mo-0.003%					Prospecting work(1965)							
85	Agum davaa	Quartz vein:	malachite	hematite	Cu-					Geological mapping(1959)***						1438	
88	Mogomin gol	Altered zone; 1500m x1000m								Prospecting work(1986)						3665	{37}
108	Bulag!	Altered zone; 900m x400m								Geological mapping(1979)**	4-24 samples					11-14 cub.	3156
109	Bayanzurkh	Altered zone; 3-5sq.m								Geological mapping(1979)**						465, 4m.cub	3156
113	Khiyasa bulag	Altered zone; 50m x0.5m	malachite	lazurite, pyrite	Cu-0.1%					Geological mapping(1980)**						3228	
114	Ider uul	Fracture zone; 750m x500m	malachite	stilbite, cassiterite	Cu-0.002-0.02%					Geological mapping(1980)**	47 samples					4digs	3228
115	Khuiten nur	Quartz vein; 100m x1.5m								Cu-0.001-0.005%; Ag-0.7g/t; Au-0.3g/t					6digs	3228	
149	Dund galt	Bed:	gold							Geological mapping(1980)**							
150	Tsagaan galt	Gold bearing bed; 0.2-1.4m	gold							Prospecting work(1984)						2times	3719
151	Dund naimagan	Gold bearing beds; 4.5km long	gold							Prospecting work(1984)						2times	3719
										Lower bed Au-400-700mg/m.cub; upper bed Au-316mg/m.cub							

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			Structure	Age of sedimentary and volcanic rocks	Metamorphic province	Country rock	Alteration	Age of mineralization	Deposit (1)
			Province	Latitude	Longitude							
152	Baga naingan	Sedimentary	Tub	48°15'00"	104°30'00"	Mongol-Ubukha-Khentiykal	Uplift	Quaternary	North Khentiy	Sediment		
153	Baga khalaast	Sedimentary	Tub	48°17'00"	104°31'00"	Mongol-Ubukha-Khentiykal	Uplift	Quaternary	North Khentiy	Sediment		
156	Zuan khavchuu	Sedimentary	Tub	48°32'07"	104°38'25"	Mongol-Ubukha-North Khentiykal	Depression	Clay, pebble	North Khentiy	Clay, pebble		
165	Jasjin buuts	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	diorite				
167	Zuun turuum gol	Hydrothermal	Bulgan	48°53'00"	103°36'00"	North Mongolia-Tariat-selenge	Depression	andesite-basalt-tuff	Lower Permian			North Mongolia andesitic-basalt-tuff
171	No.3	Hydrothermal Au	Tub	48°21'00"	104°32'00"	North Mongolia-Khentiy	Anticinal	granite				
172	No.24	Hydrothermal	Tub	48°13'00"	104°24'00"	North Mongolia-North Khentiy	Anticinal	meta-sandstone	Vendian-Lower Cambrian(V-E1)			North Khentiy meta-sandstone
173	No.22	Hydrothermal Au	Tub	48°14'00"	104°27'00"	North Mongolia-Khentiy	Anticinal	sandstone	Vendian-Lower Cambrian			North khentiy sandstone
174	No.19	Hydrothermal Au	Tub	48°16'00"	104°38'00"	North Mongolia-Khentiy	Anticinal	granite	Vendian-Cambrian(V-E1)	Middle Paleozoic		North Khentiy granite, sandstone
181	Scarn	Metasomatic	Khubsugul	50°11'00"	100°00'00"	North Mongolia-Near Khubsugul-Sinclair	granodioritic	limestone	Vendian-Cambrian(V-E1)	Devonian(D)		North Mongolia granodioritic
188	Shar khundec	Dynamic metamorphism	Bulgan	49°48'00"	103°21'00"	North Mongolia-Tariat-selenge	Synclinal	granite				North Mongolia andesitic-andesite porphyritic tuff
195	Delger uul	Hydrothermal	Khubsugul	50°02'00"	100°21'00"	North Mongolia-Near Khubsugul-Sinclair	granite	andesite, andesitic porphyritic, tuff	Lower Permian			
232	Occurrence-65	Hydrothermal	Bulgan	50°06'00"	102°27'00"	North Mongolia-Tariat-selenge	Depression	carbonate, terrigenous sediments	Lower-Middle Cambian			Lower Paleozoic, diorite
233	Sukhait	Contact metamorphism	Bulgan	50°15'00"	104°23'00"	North Mongolia-Tariat-selenge	Depression	granite				North Mongolia granite
235	Tarbagatai-76	Hydrothermal	Selenge	50°14'00"	104°23'00"	North Mongolia-Tariat-selenge	Depression	granite, granodiorite				Lower Paleozoic, Jurassic
239	Tsingig-1	Contact metamorphism	Bulgan	49°59'00"	102°29'00"	North Mongolia-Tariat-selenge	Depression	granite	Vendian			Upper Permian-Lower Triassic
								volcanic rocks, sandstone, limestone				granite

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

No.	Deposit name	Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Previous survey		Drilling	Report number	Reference	Remarks (Surveyed occurrence No.)
										Depot (2)	Prospecting work(1984)				
152	Baga naimagan	Gold bearing bed: 0.2-1.4m wide	gold				Lower bed Au-1665mg/m.cub; Upper bed Au-647mg/m.cub					3times	3719		
153	Baga khaibaasi	1200m x100m; Upper bed: 3200m x40m	gold				Au-1500-5000mg/m.cub			Prospecting work(1984)		2times	3719		
156	Zaun khavchuu	Bed: 0.8m	gold				Au-1172mg/m.cub			Prospecting work(1991)		123m	4676		
165	Jasjin baats	Altered zone: 2000m x500m					Cu-0.002-0.007%			Prospecting work(1981)*	320 samples	1028.9m.cub	334m	3538	(34)
166	Khukh chuluun uul	Quartz vein: 1.3m x0.15m					Cu-0.003-0.009%			Geological mapping(1971)**,					
167	Zaun turuuunii gol	Quartz vein: 1.5m x0.2m					Cu-			prospecting work(1981)*		131.8m.cub	70.8m	3538	
171	No5	Quartz vein:	gold				Au-0.2g/t			Geological mapping(1981)*					
172	No24	Quartz vein: 0.6m					Au-0.6g/t Ag-1.7g/t			Geological mapping(1981)*					
173	No22	Quartz vein: 1-2m wide	gold				Au-0.2g/t			Geological mapping(1981)*					
174	No19	Quartz vein: 30m x1m					Au-0.2g/t			geological mapping(1981)*					
181	Scam	Skarn: 1.5-8m					Cu-0.015-1.0%; Ag-5-10/g/t			Geological mapping(1982)*		59.6m.cub	3649	3649	(19)
188	Shar khundee	Altered zone					Cu-0.3%			Geological mapping(1979)**					
195	Delger uul	Quartz vein: 3m x0.1m					Au-310(0-7)g/t			Geological mapping(1985)*		182.9m.cub		3976	(17)
232	Occurrence-65	Quartz vein: 300m x0.8m	gold				malachite, turquoise, Au-0.3-4.0g/t; Cu-0.5-1.1%			Prospecting work(1984)					
233	Sukhai	Grisenized zone: 300m x80m					Mo-0.09-1.28%			Prospecting work(1941, 1985)					
235	Tarhagat-76	Quartz vein: 700m x2.1m	gold				Au-0.02-10g/t Ag-2800g/t			Prospecting work(1985)					
239	Tsashig-1	Skarn: 1500m x30m					Cu-0.1%; Au-3.39g/t			Prospecting work(1985)					

**Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (3a/15)**

No	Deposit name	Deposit type	Location	Province	Latitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metagenic province	Country rock	Deposit (1)	Alteration	Age of mineralization
240 Ar-shirert	Hydrothermal	Bulgan	49°29'00"	103°05'00"	North Mongolia	Tariat-selenge	Dipression		andesite porphyritic, plagiopyritic, trachyte porphyry				North Mongolia	andesite porphyrite, plagiopyrite, tuff, trachyte porphyry			
257 Bulag!	Hydrothermal	Bulgan	50°16'00"	104°22'00"	North Mongolia	Tariat-selenge	Dipression		andesite porphyritic, plagiopyritic, trachyte porphyry				North Mongolia	andesite porphyrite, tuff, trachyte porphyry			
301 Ar khundee	Sedimentary	Tub	48°30'50"	104°38'10"	Mongol-Ubur ba	North Khentii	Dipression						Jurassic				
302 The mouth of Tol river	Sedimentary	Tub	48°31'00"	104°32'00"	Mongol-Ubur ba	North Khentii	Dipression							North Mongolia granite			
306 Jalgaa-40	Sedimentary	Tub	48°15'00"	104°19'50"	Mongol-Ubur ba	North Khentii	Dipression						North Khentii	Clay, pebble			
417 Ubur nation	Sedimentary	Tub	48°07'00"	104°21'00"	Mongol-Ubur ba	North Khentii	Uplift						North Khentii	Sand, clay, pebble			
419 Nogon usnu khalas	Sedimentary	Tub	48°16'00"	104°21'00"	Mongol-Ubur ba	North Khentii	Dipression						North Khentii	Clay, pebble			
310 Jalgaa-48	Sedimentary	Tub	48°06'20"	104°21'00"	Mongol-Ubur ba	North Khentii	Uplift						North Khentii	sand, clay, pebble			
311 Uljin am	Sedimentary	Tub	48°11'00"	104°21'30"	Mongol-Ubur ba	North Khentii	Uplift						North Khentii	sand, clay, pebble			
313 Tsagaan chuluut	Sedimentary	Tub	48°10'20"	104°36'10"	Mongol-Ubur ba	North Khentii	Uplift						North Khentii	sand, clay, pebble			
314 Ongosot	Sedimentary	Tub	48°03'00"	104°37'30"	Mongol-Ubur ba	North Khentii	Dipression						North Khentii	sand, clay, pebble			
315 Oortsog	Sedimentary	Tub	48°01'20"	104°36'30"	Mongol-Ubur ba	North Khentii	Uplift						North Khentii	sand, clay, pebble			
316 Jalgaa-46	Sedimentary	Tub	48°05'00"	104°22'20"	Mongol-Ubur ba	North Khentii	Dipression						North Khentii	sand, clay, pebble			
317 Jalgaa-47	Sedimentary	Tub	48°05'00"	104°20'50"	Mongol-Ubur ba	North Khentii	Dipression						North Khentii	sand, clay, pebble			
342 Sairin khundee	Hydrothermal	Airkhangai	48°41'00"	102°08'00"	North Mongolia	Tariat-selenge	Dipression		granite, syenite porphyry				Permian-P1)	Permian-Triassic(P2-T1); Jurassic(2-3)			
343 Amnii bulag	Hydrothermal-metasomatic	Khubsugul	49°15'00"	101°34'00"	North Mongolia	Tariat-selenge	Dipression		green shale	Lower Riphean			Lower-Middle Devonian	granitoid, syenite porphyry			
344 Zaidangjin davaa	Contact metamorphism	Bulgan	48°42'00"	102°26'00"	North Mongolia	Orkhon-selenge	Dipression		carbonatized rocks	Lower Proterozoic			Lower Paleozoic	North Mongolia granite			

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (3b/15)

No.	Deposit name	Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	Report number	Reference	Remarks (surveyed occurrence No.)	
<b>Deposit (2)</b>															
240 Ar shivert		Fracture zone: 3000m x 1000m													
257 Bulag!	Stockwork: 350m	scheelite	gold	Pyrite, molybdenite, W; Mo-habnrite	W0-0,0003-0,006%		Prospecting work(1985)						4041		
301 Ar khundec	Bed: 0.4m wide	gold			Au-85-225mg/m.cub		Prospecting work(1991)						70m	4676	
The mouth of Tol river	Bed: 46.10m x 0.67m	gold			Au-445-500mg/m.cub	Au-1679.1kg	Prospecting work(1986)						4588.4m	4676	
306 Ialgaa-40	Bed: 1.8m	gold					Prospecting work(1988)						108.8m	4707	
307 Uburt narin	Bed: 0.4m wide	gold					Prospecting work(1988)						183.6m	4707	
309 Nogon usuu khailast	Bed: 0.4-1.2m	gold					Prospecting work(1987)						766.6m	4707	
310 Ialgaa-48	Bed: 0.4-1.6m	gold					Prospecting work(1989)						304.2m	4707	
311 Ujh am	Bed: 0.4-2.0m	gold					Prospecting work(1989)						709.6m	4707	
313 Tsagaan chuluut	Bed: 0.4-2.0m	gold					Prospecting work(1990)						923.6m	4707	
314 Ongosot	Bed: 0.8-1.6m	gold					Prospecting work(1990)						467.6m	4707	
315 Oortsog	Bed: 0.4-2.0m	gold					Prospecting work(1990)						450.8m	4707	
316 Ialgaa-46	Bed: 0.4-1.2m	gold					Prospecting work(1989)						388m	4707	
317 Ialgaa-47	Bed: 0.8m	gold					Prospecting work(1989)						188.8m	4707	
342 Satrim khundee	Fracture zone:						Geological mapping(1972)**							2043	
343 Aanii bulag	Skarn: 500m x 100m						Geological mapping(1972)**						484m.cub	2043	
344 Zadgaiin davaa Skarnization zone: 500m x 100m															
													173m.cub	2043	

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	Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metalogic province	Country rock	Alteration	Deposit (1)	Age of mineralization
358	Baga mich uul	Magnatic, hydrothermal	Bulgan	48 44.00	103 48.00	North Mongolia	Tariat-selenge	Dipression		andesite porphyry	Lower Permian			North Mongolia	andesite porphyry	Epidotization, Chloritization		
359	Mej uul	Hydrothermal	Bulgan	48 49.00	103 41.00	North Mongolia	Tariat-selenge	Dipression		andesitic 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 khujir	Hydrothermal	Bulgan	50 18.00	104 25.00	North Mongolia	Tariat-selenge	Dipression	granite					Lowest paleozoic	North Mongolia granite			
370	Fireen	Contact metamorphism	Bulgan	50 06.00	102 26.00	North Mongolia	Tariat-selenge	Dipression	granite					Lower Paleozoic, Permian-Triassic(P2-3)	North Mongolia granite			
472	Urgen khauuu	Hydrothermal metasomatic	Bulgan	48 03.00	102 56.00	North Mongolia	Tariat-selenge	Dipression						(T1)	trachyandesite-basalt			
404	Occurrence-9	Hydrothermal	Arkhangai	48 07.00	102 38.00	North Mongolia	Tariat-selenge	Dipression	granite	sandstone	Carboniferous(C1-2)	Mesozoic(M21)			Granite			
405	Mogod	Hydrothermal-metasomatic	Bulgan	48 17.00	101 03.00	North Mongolia	Tariat-selenge	Dipression			andesitic-basalt, trachyandesite-basalt		Permian(P2), Triassic-Jurassic(T1-J1)		andesite-basalt, trachyandesite-basalt			
406	Kholbooo ovoo	Contact metamorphism	Arkhangai	48 38.00	102 07.00	North Mongolia	Tariat-selenge	Dipression	granite, diorite		andesitic, dacic	Permian(P2)	Devonian(D1-2)	North Mongolia	granitic, dioritic			
407	Tsagaan gozgor	Hydrothermal-metasomatic	Arkhangai	48 39.00	102 12.00	North Mongolia	Tariat-selenge	Dipression	granitic, granodioritic					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, volcanic	Devonian	sedimentary rocks			North Mongolia	rhyolitic, 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				tuffaceous conglomerate, tuffaceous sandstone, tuffaceous aleurolite	North Mongolia			
411	Barchgar	Hydrothermal-metasomatic	Bulgan	48 36.00	102 39.00	North Mongolia	Tariat-selenge	Dipression	granite, granodiorite						Lower-Middle Devonian			
416	Tsookhor morii	Hydrothermal-metasomatic	Bulgan	48 45.00	103 16.00	North Mongolia	Tariat-selenge	Dipression	granitic, syenitic porphyry					Permian-Triassic(T2-T1)	North Mongolia granite, granodiorite			
417	Khai uul	Hydrothermal	Bulgan	48 42.00	103 19.00	North Mongolia	Tariat-selenge	Dipression						Triassic-Jurassic(T3-J1)	North Mongolia	volcanogenic sedimentary rocks		
418	Nomgon	Dynamic metamorphism	Bulgan	48 49.00	102 27.00	North Mongolia	Tariat-selenge	Dipression	syenite-diorite					Permian-Triassic(P2-T1)	North Mongolia	syenitic-diorite		

**Table A-2** List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (4b/16)

No	Deposit name	Morphology	Ore mineral	Gangue mineral	Deposit (2)		Previous survey		Reference	Remarks (Surveyed occurrence No.)	
					Grade	Ore reserve	Geology	Geochemistry	Trench and pit	Drilling	
358 Baga nich uul			Cu-			prospecting work(1973)*					2221
359 Mej uul						Prospecting work(1973)*					2221
360 Davaa	Fracture zone:					prospecting work(1973)*					2221, 3832
363 Bayan gol	Altered zone: 1800m x400m					Geological mapping(1974)**					2283
369 Barun khujirt	Quartz vein: 1-4m x0.5m; Alteration zone: 1700m x2m		malachite, lazurite	chalcoelite, covellite, Cu-3.0%; Au-1g/t; Ag-100-200g/t	W-0.02-1.0%		Aerogeophysical mapping(1983)**				2432
370 Erren	Fracture zone: 700m x20m				Sr-0.03-0.7%; La-0.0007-0.01%; Cu-0.002-0.03%; Ag-0.03-0.22g/t		Aerogeophysical mapping(1983)**				2432
402 Urgen khajuu	Altered zone: 34000m x500m						Aerogeophysical mapping(1986)*				4396
404 Occurrence. 9	Quant vein: 100m x3m						Aerogeophysical mapping(1988)*				4396
405 Mogod	Altered zone: 3-10m				Cu-0.007%; Zn-0.03%; Sr-0.2%		Aerogeophysical mapping(1988)*				4396
406 Kholboi ovoo	Skarn:				Cu-0.03-0.05%		Aerogeophysical mapping(1988)*				4396
407 Tsagan gozgot	Dykes: 1-5m wide				Cu-0.01-1%; Ag-0.1-50g/t		Aerogeophysical mapping(1988)*				4396
408 Shar khad	Altered zone				Mo-0.007-0.07%; Cu-0.001-0.002%		Aerogeophysical mapping(1988)*				4396
410 North Oortsog	Altered zone: 900m x250m		molybdenite		Cu-0.003%; Mo-0.001%; Ag-1.0 g/t		Aerogeophysical mapping(1988)*				4396
411 Barchgar	Altered zone: 1500m x100m					Geophysical mapping(1986)*					4403
417 Khar uul	Dioritic dykes: 200-300m		chalcopyrite boronite, gold		Au-3.10g/t; Ag-20-500g/t; Cu-0.02-0.3%		Geological mapping(1986)*				4403
418 Nemogn	Altered zone				Cu-0.2-0.5%; Au-215-300mg/t		Geological mapping(1986)*				4403
							Geological mapping(1986)*				4403

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	Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of igneous rocks	Metamorphic province	Age of sedimentary rocks	Country rock	Alteration	Age of mineralization	Deposit (1)
419	Freen kher	Dynamic metamorphism	Bulgan	48°49'00"	102°35'00"	North Mongolia	Tariat-selenge	Dipression	acidic volcanic rocks	Devonian(D2)				North Mongolia acidic volcano rocks			
420	Undrakh	Hydrothermal-metasomatic	Bulgan	48°42'00"	102°46'00"	North Mongolia	Tariat-selenge	Dipression	dioritic	subvolcanic rocks			Permian-Triassic(P2, P2-T1)	North Mongolia	dioritic, subvolcanic rocks		
421	Aguit	Hydrothermal-metasomatic	Bulgan	48°47'00"	102°57'00"	North Mongolia	Tariat-selenge	Dipression	granitic	acidic volcanic rocks	Devonian(D2)		Permian-Triassic(P2-T1)	North Mongolia	acidic volcanic rocks		
422	Greseg	Metasomatic	Bulgan	48°51'00"	102°44'00"	North Mongolia	Tariat-selenge	Dipression	granite	volcanogenic sedimentary rocks				Middle Jurassic	North Mongolia granite		
423	Zurun	Hydrothermal-metasomatic	Bulgan	48°49'00"	102°42'00"	North Mongolia	Tariat-selenge	Dipression	granite, diorite	conglomerate, andesite porphyry, subvolcanic rocks	Permian, Jurasic(P1, P1-T1)		Permian-Triassic(P2-T1)	North Mongolia	granite, diorite, subvolcanic rocks		
424	Burgjd khar	Hydrothermal-metasomatic	Bulgan	48°53'00"	102°49'00"	North Mongolia	Tariat-selenge	Dipression	granite, diorite	conglomerate, basalt, andesite porphyry	Permian, Jurasic, Quartary(P1, 12, 11)		Permian-Triassic(P2-T1)	North Mongolia	granite, diorite		
427	Nergui (III-4-29)	Hydrothermal Au	Tub	48°24'00"	104°44'00"	Mongol-Ubuk ba	North Khentii	Anticinal	granite					North Khentii	granite		
428	Nergui (III-4-27)	Hydrothermal Au	Tub	48°25'00"	104°44'00"	Mongol-Ubuk ba	North Khentii	Antikinal	granite					North Khentii	granite		
430	Berkh	Hydrothermal Au	Tub	48°33'00"	104°37'00"	North Mongolia	Tariat-selenge	Dipression	granite					North Khentii	dioritic, granodioritic		
461	Khujin gol	Hydrothermal-metasomatic	Bulgan	48°41'00"	102°12'00"	North Mongolia	Tariat-Selenge	Dipression	granitoid					North Mongolia	granitoid		
462	Oshgijn uul	Metasomatic	Arkhanga	48°44'00"	102°04'00"	North Mongolia	Tariat-selenge	Dipression	granite					Upper Permian-Lower Triassic	granite		
463	Mogoin gol	Magnetic	Arkhanga	48°45'00"	102°04'00"	North Mongolia	Tariat-selenge	Dipression	granitoid					Permian-Triassic(P2-T1)	North Mongolia granitoid		
612	Naran	Metasomatic	Selenge	49°15'00"	104°43'00"	North Mongolia	Tariat-selenge	Dipression	granite					Upper Permian-Lower Triassic	North Mongolia diorite, granite		
613	Myangan lant	Metasomatic	Selenge	49°14'00"	104°48'00"	North Mongolia	Tariat-selenge	Dipression	granite	metamorphic rocks	Proterozoic-Cambrian(PR-E1)		Trassic(T1-2)	North Khentii	Granite		
679	Ulzii ovoo	Skarn-metasomatic	Bulgan	48°16'00"	104°10'00"	Mongol-Ubuk ba	North Khentii	Uplift	granite	andesite, dacite, thyllite, tuff	Triassic-Juasic(T2-J)			Orkhon-Selenge: andesite, dacite, rhyolite, tuff			
680	Oyuut Khanikhor	Hydrothermal	Bulgan	48°10'00"	102°57'00"	North Mongolia	Tariat-selenge	Dipression	granite					Cambrian-Ordovian(E2-O1)	green shale		
858	Vchin-22 (Ule ore zone)	Hydrothermal	Tub	48°06'21"	104°22'20"	Mongol-Ubuk ba	North Khentii	Fault						North Khentii	green shale	Mesozoic(MZ1)	

(5b / 15)  
Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia

No.	Deposit name	Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Previous survey			Reference	Report number	Remarks (surveyed occurrence No.)
							Geology	Geochemistry	Geophysics			
419 Ereen ikker	Altered zone: 200m	molybdenite			Cu-0.007%; Ag-0.5g/t		Geological mapping(1986)*			4403	(26)	
420 Undrakh	Vein(phenoecystal?); 300m x150m				Cu-0.5-0.7%; Ag-1.5g/t		Geological mapping(1986)*		Magnetics, Electrics	176.6m.cub	100m	4403
421 Agut	Altered zone: 1000m x15m	chalcopyrite	malachite, lazurite	Cu-0.001-0.005%; Au-0.1g/t			Geological mapping(1986)*	650 samples	Magnetics, Electrics			4403
422 Geseg	Fracture zone:				Mo-0.0001-0.0003%; Cu-0.003-0.01%		Geological mapping(1986)*		Electrics	230.9m.cub	206.6m	4403
423 Zuuan	Vein:		chalcopyrite	turquoise, lazurite, malachite, bornite			Geological mapping(1986)*		Electrics	495.8m.cub	253.7m	4403
424 Burged khyar	Stock: 20m x600m				Cu-0.36%; Mo-0.02% 1500t		Geological mapping(1986)*	4440 samples	Magnetics, Electrics	530m.cub	319.6m	4403
427 Nergui (II)-4-29)	Quartz vein: 1100m x1m				Au-0.03-0.4g/t		Geological mapping(1986)*					4408
428 Nergui (II)-4-27)	Quartz vein: 1100m x1m				Au-0.74g/t		Geological mapping(1986)*					4408
430 Berkh	Quartz vein: 240m x25m				Au-7.5g/t		Geological mapping(1986)*	1600 samples(1986)		252m.cub(1986)		4408
461 Khuljii gol	Gneissized zone: 350m x100m tin stone				Sn-0.03%, Mo-0.0006%		Prospecting work(1977)	213 samples		56m.cub		2924
462 Oshgum uul	Gneissized zone: 250m x50m				Pb-0.03%; Zn-0.03%; Mo-0.02%		Prospecting work(1977)	419 samples	Geophysical complex work	90m.cub		2924
463 Mogin gol	Dioritic dyke: 700m x50m				Cu-0.003-0.01%		Prospecting work(1977)	213 samples		21m.cub	45m	2924
612 Naran	Altered zone				Cu-0.01-0.05%		Geological mapping(1988)*	276 samples		828.2m.cub	525.6m	4420
613 Myangan lant	Altered zone		molybdenite, arsenopyrite, galena				Geological mapping(1988)*					4420
679 Ulzii ovo	Lenticular skarn:	chalcopyrite	sphalerite		Au-0.2g/t; Cu-0.07%	Cu-45000t	Prospecting work(1987)*	566 samples	Electrics	104m.cub	2100m	4084
680 Ovxit Khonkhor	Metasomatic?				Cu-0.01%; Ag-0.2g/t; Au-4.4g/t		Geological mapping(1977, 1987)*, **	4993 samples(1987)	Magnetics, Electrics	457.8m(1977); 265.3m (1977)	525.6m(1977); 516.3m(1987)	4084
858 Vein-422 (Ule ore zone)	Quartz vein: 400m x1.4m				Au-9.25g/t		Prospecting work(1993)			5digs	214.9m	4785

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	Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Geology	Deposit (1)	Alteration	Age of mineralization
839	Vein No.41	Hydrothermal Au	Tub	48° 05' 55"	104° 30' 10"	Mongol-Ubar ba	North Khentiykal	Fault	green schist, sandstone; Middle Cambrian-siltstone	Ordovician	North Khenty	green schist, sandstone, slate	Country rock	Lower Mesozoic			
840	Vein-177 (Ute ore zone)	Hydrothermal	Tub	48° 06' 15"	104° 22' 24"	Mongol-Ubar ba	North Khentiykal	Fault	green shale, sandstone; Cambrian-alaeolite	Ordovician(E2-O1)	North Khenty	green shale, sandstone, aleoalite	Country rock	Mesozoic(M2.1)			
874 <sup>a</sup>	Vein-146 (Bichig' zone)	Hydrothermal	Tub	48° 06' 30"	104° 19' 25"	Mongol-Ubar ba	North Khentiykal	Fault	granite	Cambrian-Ordovician(E2-O1)	Ordovician(O2-3)	North Khenty	Granite	Ordovician(O2-3)		Mesozoic(M2.1)	
881	Vein-148 (Ubaan enger zone)	Hydrothermal	Tub	48° 06' 20"	104° 20' 15"	Mongol-Ubar ba	North Khentiykal	Fault	granite	shale, sandstone	Ordovician(E2-O1)	Ordovician(O2-3)	North Khenty	granite	Ordovician(O2-3)		Mesozoic(M2.1)
886	Vein-163 (Ubaan enger zone)	Hydrothermal	Tub	48° 06' 12"	104° 19' 55"	Mongol-Ubar ba	North Khentiykal	Fault	granite	shale, sandstone	Cambrian-Ordovician(E2-O1)	Ordovician(O2-3)	North Khenty	granite	Ordovician(O2-3)		Mesozoic(M2.1)
897	Vein-164 (Ubaan enger zone)	Hydrothermal	Tub	48° 06' 14"	104° 20' 08"	Mongol-Ubar ba	North Khentiykal	Fault	leucocratic granite	meta-shale, metasomatic rocks?	Cambrian-Ordovician(E2-O1)	Ordovician(O2-3)	North Khenty	leucocratic granite	Ordovician(O2-3)		Mesozoic(M2.1)
911	Ore bearing dyke series zone	Hydrothermal	Tub	48° 06' 45"	104° 24' 00"	Mongol-Ubar ba	North Khentiykal	Fault	meta-shale, metasomatic rocks?	meta-shale, metasomatic rocks?	Cambrian-Ordovician(E2-O1)	Ordovician(O2-3)	North Khenty	meta-shale, metasomatic rocks?	Ordovician(O2-3)		Mesozoic(M2.1)
935	Tsagaan chuluu zone	Hydrothermal	Tub	48° 05' 00"	104° 26' 00"	Mongol-Ubar ba	North Khentiykal	Fault	meta-shale, meta-sandstone	meta-shale, meta-sandstone	Cambrian-Ordovician(E2-O1)	Ordovician(O2-3)	North Khenty	meta-shale, sandstone	Ordovician(O2-3)		Mesozoic(M2.1)
1435	Nergui-2	Hydrothermal	Khubsgul	50° 33' 00"	100° 13' 00"	North Mongolia	Near Khubsugul Depression	acidic volcanic rocks	acidic volcanic rocks	Middle Cambrian	microsyenite porphyry limestone	Lower Cambrian	Jurassic	Lower-Middle Devonian	acidic volcanic rocks		Middle Cambrian
1436	Us gol	Hydrothermal	Khubsgul	50° 28' 00"	100° 05' 00"	North Mongolia	Near Khubsugul Depression	granodiorite	granodiorite	Lower Cambrian	microsyenite porphyry limestone	Lower Cambrian	Jurassic	Lower-Middle Devonian	microsyenite porphyry limestone		Middle Cambrian
1437	Egüün gol	Metasomatic	Khubsgul	50° 23' 00"	100° 12' 00"	North Mongolia	Near Khubsugul Depression	granodiorite	granodiorite	Lower Cambrian	microsyenite porphyry limestone	Middle Cambrian	Jurassic	Lower-Middle Devonian	microsyenite porphyry limestone		Middle Cambrian
1439	Aduun gol	Hydrothermal	Khubsgul	50° 19' 00"	100° 13' 00"	North Mongolia	Near Khubsugul Depression	syenite porphyry	syenite porphyry	Lower Cambrian	microsyenite porphyry limestone	Middle Cambrian	Jurassic	Lower-Middle Devonian	microsyenite porphyry limestone		Middle Cambrian
1440	Yankhis gol	Hydrothermal	Khubsgul	50° 17' 00"	100° 23' 00"	North Mongolia	Near Khubsugul Depression	syenite porphyry	syenite porphyry	Lower Cambrian	microsyenite porphyry limestone	Middle Cambrian	Jurassic	Lower-Middle Devonian	microsyenite porphyry limestone		Middle Cambrian
1442	Quartz	Hydrothermal	Khubsgul	50° 14' 00"	100° 17' 00"	North Mongolia	Near Khubsugul Depression	aleurolitic, shale, sandstone	aleurolitic, shale, sandstone	Lower Cambrian	microsyenite porphyry limestone	Middle Cambrian	Jurassic	Lower-Middle Devonian	microsyenite porphyry limestone		Middle Cambrian
1449	Tsagaanburgas	Magmatic	Khubsgul	49° 56' 00"	100° 21' 00"	North Mongolia	Near Khubsugul Depression	serpentinite, carbonatic	serpentinite, carbonatic	Paleozoic(PZ2)	serpentinite, carbonatic	Paleozoic(PZ2)	serpentinite, carbonatic	Lower-Middle Devonian	serpentinite, carbonatic		Paleozoic(PZ2)
1488	Egüm gol	Hydrothermal	Khubsgul	49° 56' 00"	100° 23' 00"	North Mongolia	Near Khubsugul Depression	serpentinitic	serpentinitic	Paleozoic(PZ1)	serpentinitic	Paleozoic(PZ1)	serpentinitic, carbonatic	Lower-Middle Devonian	serpentinitic, carbonatic		Paleozoic(PZ1)
1491	Altgana gol	Hydrothermal	Khubsgul	49° 51' 00"	100° 25' 00"	North Mongolia	Near Khubsugul Depression	leucocratic granite, granite	leucocratic granite, granite	Upper Paleogene-Lower Quaternary	leucocratic granite, granite	Upper Paleogene-Lower Quaternary	leucocratic granite, granite	Upper Paleogene-Lower Quaternary	leucocratic granite, granite		Jurassic

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (6b/15)

No.	Deposit name	Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Previous survey			Reference	Report number	Remarks (surveyed occurrence No.)
							Geology	Geochemistry	Geophysics			
859 Vein №41	Quartz vein: 800m x1.2m		Pyrite(py), chalcopyrite(cc)	Au-11.06g/t	Au-2.0t	Geological mapping(1991)	6digs(1991)	174m(1992)	4785			
860 <sup>1</sup> Vein-177 (Ule ore zone)	Quartz vein: 100m x0.29m			Au-0.2g/t		Prospecting work(1993)						
874 Vein-146 (Bichigt zone)	Quartz vein: 300m x1m			Au-0.1-14.61g/t		Prospecting work(1993)						
881 Vein-148 (Ulaan enger zone)	Quartz vein: 1000m x1.40m			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)						
897 Vein-164 (Ulaan enger zone)	Quartz vein: 20m x0.5m			Au-20g/t; Ag-30g/t		Geological mapping(1991)						
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 x1.0m				Au-0.5g/t	Geological mapping(1991)	12digs		4785	(1)		
1435 Nergui-2	Quartz vein: 60m x0.5m	galena	limonite, sphalerite, sericitic	Pb-0.08-0.1%	REF; Zn-0.003%; La-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)**						
1436 Ust gol	Syenite porphyry dyke: 600m x1.0m	columbite, apatite	fluorite, limonite, marcasite, magnetite, ilmenite	REE, Zn-0.003%; La-0.01%; Sr-0.09%; Y-0.003%; Ba-0.08%; Pb-0.008%	Geological mapping(1966)**							
1437 Tegijn gol	Altered zone: 6m x1.5m	cytolite				Geological mapping(1966)**						
1439 Adsun gol	Syenite porphyry dyke: 80m x2.5m	cytolite	La-0.1%; Nb-0.06%; Sr-0.02%; Y-0.02%; Ga-0.008%			Geological mapping(1966)**						
1440 Yarzhis gol	Stock: 150m x150m		Nb-0.01%; La-0.002%; Ce-0.35%; Y-0.05%; Ga-0.002%			Geological mapping(1966)**						
1442 Quartz	Quartz vein: 50m x1.5m	gold		Au-7.0g/t; Ag-0.4-3.2g/t		Geological mapping(1982)*						
1449 Tsagaan burgas	Metasomatic vein: 1200m x500m	tortite	fluorite	Ni-0.3-0.6%; Cr-0.4-1%	500 samples	Geological mapping(1965)			105m.cub	3649	(18)	
1488 Eigin gol	Altered serpentinite	chalcopyrite, malachite, azurite	magnetic pyrite	Cu-0.01-0.1%	Prospecting work(1989)	Geological mapping(1965)				4379	(16)	
1491 Altgana gol	Stockwork: 850m x50m	molybdenite		Mo-0.006-0.035%; Ag-1.5g/t		Geological mapping(1965*, 1985*)	920 samples(1985)	1269m.cub(1985)	40.8m(1985)	1812	(15)	

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	Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of igneous rocks	Metalogic province	Country rock	Alteration	Deposit (1)
1492	Khan jagalant uul	Metasomatic	Khubsugul	49 02 00	100 00 00	North Mongolia	Near Khubsugul Depression			granitic, granosyenitic, syenite	limestone, sandstone, conglomerate	Lower-Upper Cambrian		North Mongolia	granite, granosyenite, syenite	Age of mineralization
1493	Alag tolgoi	Metasomatic	Khubsugul	49 40 00	100 45 00	North Mongolia	Zed	Dipression	Granitic	trachyhyalocytic porphyry, acidic tuff	Permian(P1)		Middle Devonian, Jurassic	North Mongolia Granite		
1494	Donkhor bulag	Metasomatic	Khubsugul	49 22 00	100 10 00	North Mongolia	Ider	Dipression		acidic volcanic rocks, tuff	Upper Permian		North Mongolia acid tuff, trachyhyalocytic porphyry	North Mongolia	Silification, Kaolinization, Pyritization	
1495	Nergui	Hydrothermal	Khubsugul	49 22 00	100 03 00	North Mongolia	Near Khubsugul Depression			limestone	Lower-Middle Cambrian			Lower-Middle Cambrian	North Mongolia granite, limestone	
1500	Nergui	Metasomatic	Khubsugul	49 47 00	101 52 00	North Mongolia	Zed	Dipression	granite	meta-sandstone, schist	Upper Proterozoic			North Mongolia meta-sandstone, schist		
1525	Khomonii gol	Hydrothermal	Khubsugul	51 15 00	100 12 00	North Mongolia	Near Khubsugul Depression			crystalline shale	Upper Proterozoic			crystalline shale	North Mongolia	
1529	Nergui (No. 74)	Metamorphogenic	Khubsugul	51 03 00	100 08 00	North Mongolia	Tuba-mongol	Uplift		limestone	Lower Cambrian			Lower Cambrian	North Mongolia Limestone	
1530	Saiikhon gol	Sedimentary	Khubsugul	50 52 00	100 08 00	North Mongolia	Near Khubsugul Depression			limestone	Lower Cambrian			Lower Cambrian	North Mongolia	
1531	Baga tsagaan gol	Sedimentary	Khubsugul	50 51 00	100 04 00	North Mongolia	Near Khubsugul Depression			limestone, dolomitic	Lower Cambrian			Lower Cambrian	North Mongolia limestone, dolomitic	
1567	Khurilk gol	Hydrothermal	Khubsugul	50 39 00	100 46 00	North Mongolia	Near Khubsugul Depression			crystalline shale	Paleozoic(P2.1)			diorite, crystalline shale	North Mongolia	
1568	Ult gol	Hydrothermal	Khubsugul	50 36 00	100 02 00	North Mongolia	Near Khubsugul Depression			limestone	Vendian			North Mongolia	North Mongolia limestone	
1581	Ubir teeliiin gol	Hydrothermal	Khubsugul	49 18 00	100 41 00	North Mongolia	Zed	Dipression	granitic				Lower-Middle Devonian	granitic		
1583	Ikh khujirtuu khuree	Hydrothermal	Khubsugul	48 43 00	100 18 00	North Mongolia	Ider	Uplift	granodiorite, syenite, diorite				Lower-Middle Devonian	North Mongolia granodiorite, syenite, diorite		
1585	Gua duhan uul	Metasomatic	Bulgan	48 55 00	101 53 00	North Mongolia	Ider	Dipression	syenite porphyry, granosyenite	volcanogenic sedimentary rocks	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	andesitic, andesitic porphyry, tuff	Permian(P1)	Permian-Triassic(P2-T1)	North Mongolia andesitic, andesite porphyry, tuff	North Mongolia andesite porphyry, tuff		
1587	Yargait	Hydrothermal	Arkhangai	48 47 00	101 19 00	North Mongolia	Ider	Uplift					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			

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (7b/15)

No.	Deposit name	Morphology	Deposit (2)		Grade	Ore material	Gangue mineral	Geology	Geochimistry	Geophysics	Trench and pit	Drilling	Report number	Reference	Remarks (surveyed occurrence No.)
			Ore reserve	Previous survey											
1492 Khan jargalant uul	Skarnization zone: 90m x10m	malachite, azurite, chrysocolla	Cu-0.01-1.0%	Geological mapping(1975)**	475 samples						507.6m.cub		2660	2660, 3832	
1493 Alag tolgoi	Stock 0.78sq.km	scheelite	Mo-0.01%; Cu-0.01%; Sn-0.005%	Geological mapping(1975)**							400m.cub				
1494 Donkhor bulag	Altered zone	magnetic	Pyrite	Geological mapping(1975)**	62 samples						295.6m.cub		2660	2660	(13)
1495 Nergui	Quartz vein: 0.7-2.0m	gold	marcasite, galena, magnetic	Prospecting work(1963)	1300 samples						16digs		1812		
1500 Nergui	Skarn: 50m	chalcopyrite, malachite, azurite	Cu-										1828		
1529 Khoromuu gol	Quartz vein: 0.05-0.1m														
1530 Nergui (No74)	Thin vein:												1756		
1530 Salkhan gol	Lenticular body: 9000m x16m	pyroclastic	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	pyroclastic, hematite		Mn-23.63%; Fe-15.75%	Mn-48million ton; Fe-32million ton	Geological mapping(1987)*, (1988)**					102.3m.cub		938, 4286		
1567 Khurilt gol	Quartz-carbonate vein: 80m x0.35m	gallenite	chalcopyrite, pyrite, chalcocite	Fe-0.16-0.72%		Prospecting work(1941)					150m.cub		370	(20)	
1568 Ult gol	Quartz vein: 70m x0.5m	gallenite	chalcopyrite, malachite, azurite	Pb-0.001-0.01%		Geological mapping(1958)**							938		
1581 Ubir teclim gol	Altered zone: 4000m x300m					Geological mapping(1974)**	287 samples						2256		
1583 Ich khujiruu khuree	Fracture zone: 200m x50m	chalcopyrite, malachite, cuprite	pyrite, covellite, tenorite	Cu-2.1%		Prospecting work(1966)	709 samples				177m.cub		1812, 1814		
1585 Gua ulan uul	Altered zone: 4500m x200m					Geological mapping(1973)**; geophysical survey(1976)*	724 samples(1973)	Complex work(1976)			255.7m.cub(1973)		2043, 2676	(10)	
1586 Zost tolgoi	Altered zone: 2.5km x1km	malachite, chalcocite	gallenite, sphalerite	Cu-0.12-0.25%; Au-0.1g/t		Prospecting work(1981, 1983)*	6.89 km field	Magnetics, Electrics			408.6m		2283, 3703, 2924	(11)	
1587 Yargait	Lenticular? stockwork: 200m x40m	cuprite, molybdenite				Prospecting work(1984)	270 samples						3703	Electric	(12)
1608 Usnii gasar	Altered zone: 2.3sq.km	pyrite											holes		

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (8a-15)

No	Deposit name	Deposit type	Location			Geology	Sedimentary and volcanic (plutonic) rocks	Age of sedimentary rocks	Age of igneous rocks	Metalogenic province	Country rock	Alteration	Age of mineralization
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure					
1609 Burquin gorkhi	Hydrothermal	Akhangaui	48°37'15"	101°07'10"	North Mongolia	Ider	Upift	granite, granosyenitic, syenitic	dacite, andesite-dacite, porphyrite, rhyolitic porphyrite	Upper Permian-Lower Triassic			
1611 Khavgaim mod	Hydrothermal	Akhangaui	48°09'00"	101°55'00"	North Mongolia	Tariat-seleng	Depression	granite		Lower Devonian			
1612 Khuiten nuur		Akhangaui	48°05'00"	101°56'00"				granite		Lower paleozoic			
1802 Eren gol	Sedimentary	Bulgan	50°05'00"	102°28'00"	North Mongolia	Zed	Depression		acidic volcanic rocks	Lower-Upper Permian			
1803 Tsagan chuluutin bulag	Sedimentary	Bulgan	50°07'00"	103°44'00"	North Mongolia	Zed			acidic volcanic rocks	Lower Paleozoic			
1805 Zanuu nuuu	Hydrothermal Au	Tub	48°32'00"	104°36'00"	Mongol-Ubur ba	North Khentii	Upift	gabbro-diortic			North Mongolia sand, pebble		
1918 Urmensagaan nuur	Hydrothermal	Bulgan	48°48'00"	102°55'00"	North Mongolia	Tariat-seleng	Depression		trachyte porphyry, trachyanandesitic porphyry				
1922 Khudag	Sedimentary	Tub	48°25'00"	104°42'00"	Mongol-Ubur ba	North Khentii	Upift				Upper Triassic-Jurassic		
1923 Uguumerim am	Sedimentary	Tub	48°26'00"	104°34'00"	Mongol-Ubur ba	North Khentii	Upift				Quaternary(OII-IV)		
1924 Alt khundee	Sedimentary	Tub	48°23'00"	104°33'00"	Mongol-Ubur ba	North Khentii	Upift				Quaternary(OI-III)		
1926 Alt tamsg	Sedimentary	Tub	48°20'00"	104°31'00"	Mongol-Ubur ba	North Khentii	Depression				Triassic(T)		
1928 Ubai urt	Sedimentary	Tub	48°17'00"	104°46'00"	Mongol-Ubur ba	North Khentii	Depression				Quaternary		
1929 Baruun chingelt	Sedimentary	Tub	48°14'00"	104°41'00"	Mongol-Ubur ba	North Khentii	Depression	granite			Quaternary		
1930 Shar borjin uul	Hydrothermal Au	Tub	48°03'00"	104°41'00"	Mongol-Ubur ba	North Khentii	Depression	granite			Middle Paleozoic		
1931 Dulan	Sedimentary	Tub	48°12'00"	104°40'00"	Mongol-Ubur ba	North Khentii	Depression	granite			sandstone, shale, clay, pebble	Lower Carboniferous, Middle Paleozoic	
1933 Boodog	Sedimentary	Tub	48°09'00"	104°55'00"	Mongol-Ubur ba	North Khentii	Depression				N2		
1934 Badarkh	Hydrothermal Au	Tub	48°08'00"	104°56'00"	Mongol-Ubur ba	North Khentii	Depression	granite			Sand, pebble, clay	Quaternary	
											sandstone, siltstone	Lower-Middle Paleozoic	
											sandstone	North Khentii granite	Benitization. Limonitization
											clay, pebble		Upper Paleozoic
													Benzitization. Silification

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (8b/15)

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (9a/15)

No.	Deposit name	Deposit type	Location			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcano rocks	Age of sedimentary rocks	Age of igneous rocks	Metabogenic province	Country rock	Alteration	Deposit (1)	Age of mineralization
1935 Togt	Hydrothermal	Tub	48.06 00	104.20 00	Mongol-Ubar	North Khentii	Depression				meta-sandstone	Paleozoik(PZ1)				North Khentii	meta-sandstone	Permian		
1936 Tsagaan chuituu	Hydrothermal, placer	Tub	48.04 00	104.55 00	Mongol-Ubar	North Khentii	Uplift	granite			sandstone	Lower Paleozoic	Middle Paleozoic			North Khentii	granitic sandstone			
2756 Yashik-II (N4)	Magmatic	Seleng	48.56 00	104.50 00	North Mongolia	Tariat-selenge	Depression				siltstone	Lower Carboniferous				North Mongolia	siltstone			
2757 Zuskin tolgoi-18	Magmatic, metasomatic	Seleng	48.54 00	104.48 00	North Mongolia	Tariat-selenge	Graben	diorite			siltstone	Lower Carboniferous	Upper Permian-Lower Triassic			North Mongolia	gneiss			
2761 Shar us gol	Sedimentary	Seleng	48.51 00	104.58 00	North Mongolia	Tariat-selenge	Horst				sand, pebble	Quaternary(QII)				North Khentii	sand, pebble			
2761 Bayantsogt	Metamorphic	Seleng	48.51 00	104.48 00	North Mongolia	Tariat-selenge	Graben				aleurolite, claystone	Lower Carboniferous				North Khentii	aleurolite, claystone			
2763 Khoshuu tolgoi	Hydrothermal-metasomatic	Seleng	48.49 00	104.47 00	North Mongolia	Tariat-selenge	Graben	granite			sandstone, siltstone, conglomerate	Lower Carboniferous	Upper Permian-Lower Triassic			North Mongolia	gneiss			
2767 Tol river's bank	Sedimentary	Seleng	48.44 00	104.44 00	North Mongolia	Tariat-selenge	Horst				sandstone, clay, pebble	Quaternary(QII-III)				North Khentii	sand, clay, pebble			
2770 Tol river	Sedimentary	Seleng	48.42 00	104.45 00	North Mongolia	Tariat-selenge	Horst				aleurolite, clay	Quaternary				North Khentii	sand, clay, pebble			
2772 Bulgan sair	Sedimentary	Seleng	48.41 00	104.44 00	North Mongolia	Tariat-selenge	Graben	granodioritic granite			sandstone, clay, pebble	Quaternary(QIV)				North Khentii	aleurolized clay			
2774 Anand (No109)	Metasomatic Au occurrence	Seleng	48.41 00	104.59 00	North Mongolia	Zed	Depression	leucocratic granite			aleurolite, clay	Middle-Upper Ordovician	Lower Jurassic			North Khentii	granodiorite, granite	Silification, Biotitization		
3150 Largant	Hydrothermal-metasomatic	Bulgan	50.15 00	102.45 00	North Mongolia	Zed	Depression	schist			aleurolized clay	Vendian-Lower Cambrian	Middle-Upper Devonian			North Khentii	leucocratic granite	Lower Jurassic		
3511 Au zolgo	Sedimentary	Bulgan	50.02 00	102.10 00	North Mongolia	Zed	Depression	schist			sediment	Quaternary(QIII-IV)	Zed			North Khentii	sediment			
3743 118 vein	Hydrothermal Au	Tub	48.16 40	104.33 45	North Mongolia	Tariat-selenge	Depression				clay schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician			North Mongolia	clay schist, sandstone			
3745 194c vein	Hydrothermal Au	Tub	48.15 25	104.33 05	North Mongolia	Tariat-selenge	Depression				clay schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician			North Mongolia	clay schist, sandstone			
3746 188 vein	Hydrothermal Au	Tub	48.16 35	104.31 35	North Mongolia	Tariat-selenge	Depression				schist, sandstone					North Mongolia	schist, sandstone			

**Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (9b/15)**

No.	Deposit name	Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	Report number	Reference	Remarks (surveyed occurrence No.)
Deposit (2)														
1935 Tsogt	Quartz vein:	gold			Au-0,1-1,2g/t		Geological mapping(1985)*	1600 samples				3979	(1)	
1936 Tsagaaan chuluut	Cold 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-0,02mg/m.cub		Geological mapping(1985)*						3988, 3979	
2756 Yashil-II (N4)	Dorite stock: 100m x50m				Mo-0,02%	Mo-13t	Geological mapping(1991)*						4548	
2757 Zuslan togoi-18	Altered zone: 500m x500m				Cu-0,01%	Cu-10,12t	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 Bayantsogt	Aleurolite bed: 100m x100m				P2=800m.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)*						4548	
2767 Tol river's bank	Bed(1): 2500m x180m; Bed(2): 5000m x60m	gold			Au(I)-580mg/m.cub; Au(II)-1660mg/m.cub	Au(I)-1461kg; Au(II)-398kg	Geological mapping(1991)*						4548	
2770 Tol river	Bed: 5000m x150m	gold			Au-1080mg/m.cub	Au-648kg	Geological mapping(1991)*						1500m	4548
2772 Bulgiin sair	Clay bed: 2,0m (wide)				Clay-P2=50000m.cub		Geological mapping(1991)*						40m pits	4548
2774 Anand (No.109)	Altered zone: 600m x5,0m				Au-0,1-1,0g/t		Geological mapping(1991)*						5170	
3356 Jargalant	Fracture zone: 80m x2m				Cu-0,72%		Prospecting work(1988)						4552	
3511 Alt zolgo	Bed: 1350m x216m	gold			Au-2,03kg		Geological mapping(1997)*						18pits	
3743 118 vein	Altered zone: 30m	pyritic, chalcopyritic	malachite, azurite		Au-6,6t		Prospecting work(1989)						Mining work 157m (1989)	4706
3744 117 vein	Quartz vein: 300m x 1,6m				Au-1,7t		Prospecting work(1989)						2digs(1989)	4706
3745 194c vein	Quartz vein:				Au-2,1t		Prospecting work(1989)						13287m.cub(1989)	3holes(1989)
3746 188 vein	Quartz vein:				Au-0,5-60,2g/t		Prospecting work(1989)							4706

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	Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of igneous rocks	Metrogenic province	Country rock	Alteration	Age of mineralization	Deposit (1)
3747 188-1 vein	Hydrothermal Au Tub		Central Mongolia	48°16'35"	104°31'40"	Tarai-selenge	Depression		clay schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician					
3748 191 vein	Hydrothermal Au-metasomatic	Tub	North Mongolia	48°16'35"	104°31'27"	North Mongolia	Tarai-selenge	Depression	schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician					
3749 194, 194b veins	Hydrothermal Au	Tub	North Mongolia	48°15'44"	104°35'05"	North Mongolia	Tarai-selenge	Depression	schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician					
3750 197 vein	Hydrothermal Au	Tub	North Mongolia	48°18'03"	104°35'07"	North Mongolia	Tarai-selenge	Depression	schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician					
3751 56 vein	Hydrothermal Au	Tub	North Mongolia	48°16'36"	104°34'50"	North Mongolia	Tarai-selenge	Depression	schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician					
3752 58a vein	Hydrothermal Au	Tub	North Mongolia	48°16'54"	104°34'49"	North Mongolia	Tarai-selenge	Depression	schist, sandstone, schist-sandstone	Middle Cambrian-Lower Ordovician	Ordovician					
3753 55 vein	Hydrothermal Au	Tub	North Mongolia	48°16'45"	104°35'03"	North Mongolia	Tarai-selenge	Depression	schist, sandstone, schist	Middle Cambrian-Lower Ordovician	Ordovician					
3754 115 vein	Hydrothermal Au-metasomatic	Tub	North Mongolia	48°16'11"	104°31'38"	North Mongolia	Tarai-selenge	Depression	schist, sandstone, schist	Middle Cambrian-Lower Ordovician	Ordovician					
3755 188-2 vein	Hydrothermal Au	Tub	North Mongolia	48°16'32"	104°31'20"	North Mongolia	Tarai-selenge	Depression	schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician					
3756 188-3 vein	Hydrothermal Au	Tub	North Mongolia	48°16'35"	104°31'25"	North Mongolia	Tarai-selenge	Depression	schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician					
3757 189 vein	Hydrothermal Au	Tub	North Mongolia	48°16'14"	104°32'20"	North Mongolia	Tarai-selenge	Depression	schist, sandstone, shale	Middle Cambrian-Lower Ordovician	Ordovician					
3758 Vein-107	Hydrothermal	Tub	North Mongolia	48°17'04"	104°29'32"	North Mongolia	Tarai-selenge	Depression	schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician					
3759 198, 181, 182, 183 veins	Hydrothermal Au	Tub	North Mongolia	48°14'15"	104°30'45"	North Mongolia	Tarai-selenge	Depression	schist, sandstone	Middle Cambrian-Lower Ordovician	Ordovician					
4023 Occurrence-16	Hydrothermal Au occurrence	Bulgan	North Mongolia	50°15'15"	104°28'30"	North Mongolia	Zelter	Dome/cupola	granite	Zelter	Zelter			Sulfification, Sulphidization		
4024 Occurrence-14	Hydrothermal Au	Bulgan	North Mongolia	50°15'40"	104°27'35"	North Mongolia	Zelter	Dome/cupola	granite	Zelter	Zelter					
4025 Occurrence-7	Hydrothermal Au	Bulgan	North Mongolia	50°17'05"	104°31'03"	North Mongolia	Zelter	Dome/cupola	granite	Middle Jurassic	Zelter	Zelter				
4026 Occurrence-15	Hydrothermal Au	Bulgan	North Mongolia	50°15'30"	104°27'48"	North Mongolia	Zelter	Dome/cupola	granite	Middle Jurassic	Zelter	Zelter				

**Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (10b/15)**

No.	Deposit name	Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	Report number	Reference	Remarks (Surveyed occurrence No.)	
3747 188-1 vein	Hydro-metasomatic: 40m	pyrite, chalcopyrite			Au-0.1-6.0g/t	Au-1.6t	Prospecting work(1989)			2digs(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					Prospecting work(1989)					909.6m(1989)	4706		
3751 36 vein	Quartz vein: 1000m x 7.8m	pyrite, chalcopyrite			Au-0.1-21.01g/t	Au-0.68t	Prospecting work(1989)					909.6m(1989)	4706		
3752 36a vein	Quartz vein: 500m x 1.7m	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 x 3m	pyrite, galena			Au-0.1-130g/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 x 2m	pyrite, chalcopyrite			Au-30g/t	Au-0.7t	Prospecting work(1989)								
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)*								
4024 Occurrence-14	Stockwork	gold	pyrite		Au-0.2g/t	Au-1.6kg	geological mapping(1995)*								
4025 Occurrence-7	Stockwork: 50m x 50m	gold			Au-0.2g/t	Au-67.5kg	Geological mapping(1996)*								
4026 Occurrence-15	Stockwork: 700m x 2m				Au-3.7kg; Ag-30.0g/t	Au-3.7kg; Ag-56.7kg	Geological mapping(1995)*								

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	Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metageneic province	Country rock	Alteration	Deposit (1)	Age of mineralization
4027 Occurrence-8	Hydrothermal Au	Bulgan	50 16 27	104 29 46	North Mongolia	Zelter	Dome/cupola				Sandstone				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. Silification	
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			Zelter	Meta sandstone			
4031 Occurrence-24	Hydrothermal	Bulgan	50 13 10	104 28 08	North Mongolia	Zelter	Dome/cupola	granosyenite			Sandstone			Zelter	granosyenite			
4032 Gatsurkhan	Hydrothermal Au	Bulgan	50 10 02	104 25 00	North Mongolia	Zelter	Dome cupola	granite			Limestone, sandstone			Zelter	granite	Pyritization		
4033 Occurrence-30	Hydrothermal Au	Bulgan	50 17 23	104 13 28	North Mongolia	Zelter								Zelter	leucocratic granite			
4034 Bay-44	Hydrothermal	Seleng	50 22 58	104 56 00	North Mongolia	Zelter	Deep fault		leucocratic granite	amazonite granite	Sandstone			Zelter	amazonite granite			
4035 Bay-45	Hydrothermal	Seleng	50 23 20	104 56 25	North Mongolia	Zelter	Deep fault		meta-andesitic, meta-aeurolite	andesite	Lower Permian			Zelter	granite			
4041 Nomt uui	Skarn	Bulgan	50 12 57	104 36 20	North Mongolia	Zelter, butecilin	Deep fault		leucocratic granite	meta-andesitic, meta-aeurolite	Lower Permian			Zelter	leucogranite			
4042 Khuit	Skarn	Bulgan	50 13 35	104 37 02	North Mongolia	Zelter, butecilin	Deep fault		leucocratic granite	meta-andesitic, meta-aeurolite	Lower Permian			Zelter	leucogranite			
4043 Bay-152	Sedimentary	Seleng	50 22 00	104 54 00	North Mongolia	Zelter, butecilin	Depression			Sand, pebble	Quaternary			Zelter	sand, pebble			
4044 Bay-153	Sedimentary	Seleng	50 22 30	104 56 00	North Mongolia	Zelter, butecilin	Depression			Sand, pebble	Quaternary			Zelter	sand, pebble			
4045 Mukhar bay-155	Sedimentary	Seleng	50 22 30	104 58 45	North Mongolia	Zelter, butecilin	Depression			Sand, pebble, clay	Quaternary			Zelter	sand, pebble, clay			
4046 Monoste-i-154	Sedimentary	Seleng	50 24 58	104 14 15	North Mongolia	Zelter-Buteclin	Depression			Sand and clay	Quaternary(IV)			North Mongolia	sand and clay			
4049 Baruun kujir-151	Sedimentary	Bulgan	50 13 00	104 34 00	North Mongolia	Zelter, butecilin	Depression			Sandstone, clay, pebble	Quaternary(IV)			Zelter	Sand, clay, pebble			
4287 Bisnuth occur-99	Bisnuth occur-	Seleng	50 14 40	104 53 20	North Mongolia	Zelter, zed	Fault								Buclelin nuruu, Egiam gol	Middle Proterozoic alkaline granitic		

**Table A2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (11b/15)**

No.	Deposit name	Morphology	Ore mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	Report number	Reference	Remarks (surveyed occurrence No.)	
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		
4032 Gatsuurkhan	Altered zone: 400m x150m	gold		Au-0.02g/t	Au-324kg	Geological mapping(1994)*	44m2 fields					5031		
4033 Occurrence-30	Stockwork: 200m x150m	gold		Au-0.02g/t	Au-81kg	Geological mapping(1996)*						5031		
4034 Bay-44	Quartz vein: 250m x100m	gold	limonite, hydrogeolite, pyritic	Au-0.02-0.2g/t	Au-540kg	Geological mapping(1996)*						5031		
4035 Bay-45	Quartz vein: 250m x80m	gold	limonite, goethitic?, pyritic	Au-0.02-0.2g/t	Au-540kg	Geological mapping(1996)*						5031		
4041 Nomiit uul	Lenticular body: 200m x80m	gold		Au-0.03g/t; Mo-0.001%	Au-43kg	Geological mapping(1994)*						5031		
4042 Khant	Lenticular body: 400m x300m	gold		Au-0.01g/t; Cu-0.01%	Au-162kg	Geological mapping(1994)*						5031		
4043 Bay-152	Bed: 2km x0.4km	gold		Au-580mg/m.cub	Au-18kg	Geological mapping(1996)*						5031		
4044 Bay-153	Placer:	gold		Au-		Geological mapping(1996)*						5031		
4045 Makhai bay-155	Placer:	gold		Au-		Geological mapping(1996)*						5031		
4046 Monoster-154	Placer: 0.4m deep	gold		Au-30.0mg/m.cub		Geological mapping(1995)*						5031		
4049 Barun khujii-151	Bed:	gold		Au-sign		geological mapping(1995)*						5031		
4287 Bismuth occur-99	Quartz vein: 20m x0.5 m			Bi-0.01%; W-0.002%		Bi-0.054%; W-0.011	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

No.	Deposit name	Deposit type	Location	Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metrogenic province	Country rock	Alteration	Age of mineralization
4288	Bismuth occurrence		Selengi		50 14 40	104 53 20	North Mongolia	Zalter, zed	Fault	granite-gneiss					Buteclin nuruu, granite-gneiss		
4290	Malkhan uul		Selengi		50 15 57	104 54 37	North Mongolia	Zalter, zed	Fault	granite-gneiss					Buteclin nuruu, gneissose granite		
4291	Khergech		Selengi		50 15 57	104 54 37	North Mongolia	Zalter, zed	Fault	gneissose granite					Buteclin nuruu, granite-gneiss		
4302	Ulen		Selengi		50 14 50	104 52 55	North Mongolia	Zalter, zed	Fault	granite					Buteclin nuruu, granite		
4372	Khirbes uul	Hydrothermal	Khubsugul		50 26 10	102 00 30	North Mongolia	Tarai-selenge Depression									
4379	Subargaul	Hydrothermal	Khulsugul		50 23 00	102 04 40	North Mongolia	Tarai-selenge Depression									
4380	Lusin övöd (olgoi)	Contact metamorphism	Bulgan		50 09 15	102 44 30	North Mongolia	Tarai-selenge Depression									
4381	Ovooii bulan	Contact metamorphism	Bulgan		50 10 00	102 41 30	North Mongolia		Depression								
4407	Batuun khujir		Bulgan		50 16 38	104 26 00	North Mongolia	Zalter	Fault						Buteclin nuruu	Sandstone	
4625	Serkh tsakhir uul	Hydrothermal-metasomatic	Khubsugul		50 11 15	102 16 10	North Mongolia	zed									
4626	Salkhituu chkh	Hydrothermal	Bulgan		50 10 40	102 20 50	North Mongolia	Zed		syenite							
4627	Khusit	Contact metamorphism	Bulgan		50 11 30	102 28 50	North Mongolia	Zed		granite	Vendian-Cambrian	Vendian-Cambrian(V-E1)	Triassic-Jurassic(13-11)	Zed	meta-volcanic rocks	meta-volcanic rocks	Epidotization, Limonization, Brecciation
4628	Jargalait	Hydrothermal	Bulgan		50 14 44	102 42 54	North Mongolia	Zed		granite, granodiorite, leucocratic granite	Vendian-Cambrian	Vendian-Cambrian(V-E1)	Cambrian, Permian-Triassic(E2-3, P2-11)	Zed	granite	granite	Hornfelsization, Silification
4629	Salkhituu gol	Contact metamorphism	Khubsugul		50 07 30	102 11 50	North Mongolia	Zed		meta-andesite, meta-felsic rocks	Vendian-Cambrian	Vendian-Cambrian(V-E1)	Cambrian, Permian-Triassic(E2-3, P2-11)	Zed	granite, granodiorite, leucocratic granite	granite	Silification, Chloritization, Skarnization, Epidotization, Subphreatization
4630	Ar zorlogo	Hydrothermal	Bulgan		50 05 30	102 10 00	North Mongolia	Zed		andesite, syenite, quartz-syenite	Cambrinan(E1-2, E1-V-OI)	Cambrinan(E1-2, E1-V-OI)	Devonian, Permian-Triassic(D2, P2-11)	Zed	andesite, basalt, limestone, andesite, tuffaceous alkali syenite, leucocratic granite	alkali syenite, leucocratic granite	Silification, Skarnization, Epidotization, Subphreatization, Hornfelsization, Silification, Limonization, Epidotization, Feldspartization
4631	Khet uul	Epithermal	Bulgan		50 05 30	102 43 00	North Mongolia	Zed		limestone, andesite, ryolitic	Cambrinan(E1-V, P1)		Zed	limestone, andesite, ryolite			

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**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 Report number	Remarks (surveyed occurrence No.)	
		Morphology	Ore mineral	Gangue mineral	Grade	Ore reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	
4288 Bismuth occur- 100	Quartz vein:600m x7m				Bi-0.01%; W-0.001%	Bi-226t; W-0.22t	Geological mapping(1996)*					5031
4290 Makhbar uul	Quartz vein: 10m x0.4m	bismuth			Bi-0.07%; Au-0.01g/t	Bi-0.15t	Geological mapping(1996)*					5031
4291 Khuregch	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
4372 Khibes uul	Altered zone: 120m x850m	malachite	azurite		Cu-0.002-0.03%		Geological mapping(1992)**					4862 (21)
4379 Subarga uul	Altered zone: 100m x800m	malachite	azurite		Cu-0.002-0.03%; Mo- 0.00015-0.0002%		Geological mapping(1992)**					4862 (22)
4380 Losin ovoo tolgoi	Skarn: 180m x20m				Cu-0.07-1%; Ag- 0.00005%		Geological mapping(1992)*	45 samples				4862, 5170
4381 Ovoo-nii bulan	Skarn: 140m x4.0m		malachite, azurite		Cu-0.001-0.007%;		Geological mapping(1992)*					44digs
4407 Barun khujir	Microgranite dyke: 500m x20m				Nb-0.01%; Ag-1g/t; Be- 0.001%	Nb-1.35t	Geological mapping(1996)*					5031
4625 Serkh tsakhin uul	Quartz-epidote vein: 500m x0.7m	gold			Au-278.0g/t; Cu-0.01%	Au-1036.9kg	Geological mapping(1997)*	10 samples				5170 (23)
	Altered zone: 100m x50m. Automorphic breccia: 700m				Au-0.00002g/t	Au-6.6kg	Geological mapping(1997)*	13 samples				5170
4627 Khust	Skarn: 15m x37m; Stock: 300m x150m	malachite	malachite		Au-0.01-0.002%		Geological mapping(1997)*	574 samples				5170
4628 Jaralgant	Altered zone: 100m x4.3m	gold	malachite, azurite		Au-0.05g/t; Cu-0.02%	Cu-10.6t	Geological mapping(1997)*	17 samples				5170 (24)
4629 Salkhitium goi	Ore body:1-700m x20m; Ore body:2-110m x50m; Ore body:3- 60m; Ore body:4-80m x30m	gold	malachite, magnetic magnetite, hematite		Au-53.52g/t; Cu-0.01%; Ag-0.5g/t	Au-24325.0kg	Geological mapping(1997)*	103 samples				5170
4630 Ar zorlego	Altered zone: 2500m x2000m	gold			Au-0.03g/t	Au-6747.0kg	Geological mapping(1997)*					104m.cub
4631 Khet's uul	Altered zone: 1200m x80m	gold	malachite, magnetic		Au-0.2g/t	Au-146kg	Geological mapping(1997)*	19 samples				344m.cub

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	Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Age of igneous rocks	Metatogenic province	Country rock	Alteration	Deposit (1)	Age of mineralization
4632 Bulagt am	Hydrothermal Au	Bulgan	50°01' 20" N	102°37' 40" E	North Mongolia	Zed	Deep fault			syenite, quartz-syenite, meta-andesite	Vendian-Lower Cambrian	Vendian-Lower Cambrian	Trassic(F2-3, P2-T1)	Cambrian, Permian-Triassic(R1, V-E1)	Zed		Silicification?, Stannization, Sericitization	
4633 Khonit uul		Khubsugul	50°14' 38" N	102°03' 30" E	North Mongolia	Zed				basalt, crystalline limestone, andesite, tuff, limestone	Riphean, Vendian(V-E1)						Hornfelsization, Marlization, Stannization	
4636 Bayan ovo ovo	Contact metamorphism	Khubsugul	51°20' 30" N	100°55' 00" E	North Mongolia	Zed	Oncrow			granite, diorite, gabbro-diorite	metamorphic rocks	Middle Riphean	Middle Upper Cambrian				Epidotization, Feldspatization	
4637 Urian zhukh uul	Contact metamorphism	Khubsugul	51°34' 30" N	100°50' 40" E	North Mongolia	Zed	Oncrow			limestone, marble, crystalline shale, quartzite	Lower-Middle Riphean	Middle-Upper Cambrian		North Mongolia	North Mongolia	granite, diorite, gabbro-diorite		
4638 Arvan gurvan ovoot uul	Hydrothermal	Khubsugul	51°27' 30" N	100°43' 00" E	North Mongolia	Zed				carbonate, basalt	Vendian-Cambrian(V-E1); Neocene(N1)	Devonian(D2)		North Mongolia	North Mongolia	syenite, quartz-syenite	Silicification?, Greisenization, Limonitization	Middle Devonian
4639 Shignud kovi	Hydrothermal	Khubsugul	51°16' 30" N	100°52' 58" E	North Mongolia	Zed	Oncrow			gneiss, basalt	Lower Neogene	Middle-Upper Devonian						Middle Devonian
4641 Tsagaangol	Hydrothermal	Khubsugul	50°55' 20" N	101°43' 50" E	North Mongolia	Zed	Oncrow			gneiss, basalt	Riphean(R2); Neocene(N2)	Cambrian(F1-2)		North Mongolia	North Mongolia	plagiogranite	Hornfelsization, Ironization	
4690 Darkhit uul	Plutogenic-hydrothermal	Arikhangai	48°58' 30" N	101°11' 30" E	North Mongolia	Khangai-Khentii	Dipression			andesite, tholeite	Lower-Middle Jurassic	Lower-Middle Jurassic						
4692 Tosongum khooloi	Sedimentary	Arikhangai	48°13' 00" N	102°25' 00" E	North Mongolia	Khangai-khentii Depression				sediment	Quaternary(OIV)			Central Mongolia	Central Mongolia		Limonitization, Silicification?, Feldspatization, Epidotization	
4693 Ikh elgedin gol	Sedimentary	Arikhangai	48°54' 50" N	100°34' 40" E	North Mongolia	Khangai-Khentii	Dipression			sandstone, clay, pebble	Quaternary(OIV)			Central Mongolia	Central Mongolia			
5141 Khavchugum gun jaga	Sedimentary	Selenge	49°15' 00" N	100°40' 00" E	Mongol-Ubukha yatal	North Khentii	Dipression			sandstone, clay, pebble	Quaternary(OIII-IV)			North Khentii	North Khentii	sand, clay, pebble		
5223 Dalkh ovo ovo-12	Metasomatic	Selenge	49°28' 00" N	104°56' 00" E	North Mongolia	Tariat-Selenge	Dipression			andesite, dacite, ryholite	Upper Permian					andesite, dacite, ryholite		
5343 Alingyr	Hydrothermal	Arikhangai	48°25' 27" N	100°24' 00" E	North mongolia	Ider	Uplift			granite				Middle Paleozoic		granite		
5344 Khumain	Metamorph	Arikhangai	48°01' 00" N	101°25' 00" E	Orkhon-Selenge		Dipression			ryholite and felsic porphyry	Lower Permian					ryholite, ilvööite and felsite porphyry		
5354 Ar khahan	Hydrothermal	Bulgan	49°30' 00" N	103°39' 00" E	North Mongolia	Zed	Uplift			gneiss	Riphean					gneiss		
5362 Nergui	Hydrothermal	Selenge	49°57' 00" N	104°41' 00" E	North Mongolia	Tariat-Selenge	Dipression			granite, pegmatitic				Cambrian	Cambrian	granite, pegmatite	Gneissization	
5366 Khoshuu ovo	Hydrothermal	Selenge	50°16' 00" N	104°52' 00" E	Orkhon-Selenge		Dipression			green shale				green shale	Cambran			

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (13b / 15)

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			Age of igneous rocks			Metageneic province			Deposit (1)	
			Province	Latitude	Longitude	Tectonic zone	Formation	Structure	Igneous (plutonic) rocks	Sedimentary and volcanic rocks	Age of sedimentary rocks	Country rock	Alteration	Age of mineralization		
5385 Nergui		Hydrothermal	Bulgan	50 07 00	102 28 00	North Mongolia Zed		Dipression	granite			Jurassic		North Mongolia granite		
5386 Nergui		Hydrothermal	Bulgan	49 59 00	102 25 00	North Mongolia Tarai-selenge	Dipression		quartzite, andesitic porphyry?		Upper Permian			andesitic porphyry?, quartzite		
5387 Bayasgalan-6		Metasomatic	Bulgan	49 58 00	102 30 00	North Mongolia Tarai-selenge	granite		rhyolite, rhyolite porphyry		Upper Permian	Lower-Middle Devonian		rhyolite, rhyolitic porphyry		
5388 Tsatshir uul		Skarn	Bulgan	49 58 00	102 39 00	North Mongolia Tarai-selenge	Dipression	granitoid	limestone, andesitic		Vendian-Lower Cambrian	Lower-Middle Devonian		andesitic granitoid		
5389 Khuruit		Skarn	Khulsugul	49 50 00	102 03 00	North Mongolia Zed	Dipression		serpentinite		Middle Cambrian			serpentinite		
5390 Khushuu		Hydrothermal-metasomatic	Khulsugul	49 57 00	102 14 00	North Mongolia orkhon-selenge			brecciated porphyry?		Upper Carboniferous			brecciated porphyry?		
5391 Khavchinga		Skarn	Bulgan	49 50 00	103 29 00	North Mongolia orkhon-selenge			leucocratic granite	trachyandesitic-basalt, trachybasalt		Lower Jurassic		trachyandesitic-basalt, trachybasalt		
5392 Ugsant uul		Skarn	Selenge	49 42 00	104 56 00	North Mongolia orkhon-selenge	Uplift		andesitic, andesitic-basalt, andesite porphyry		Permian			andesitic, andesite porphyry, andesitic-basalt		
5394 Zuun chingelt-21		Hydrothermal-metasomatic	Tub	48 15 00	104 41 00	North Mongolia Tarai-selenge	Dipression	granite						andesitic-basalt, andesite porphyry		
5398 Tsagaan jalgijn bulag		Metasomatic	Bulgan	50 08 00	103 43 00	North Mongolia Zed	Uplift			limestone, shale		Lower Cambrian		limestone, shale		
5400 Khujirjin gol		Hydrothermal	Bulgan	49 08 00	103 39 00	North Mongolia Tarai-selenge	Dipression	granodiorite, granosyenite						granodiorite, granosyenite		
5403 Urmiin tsagan nuur		Metasomatic	Bulgan	48 48 00	102 55 00	North Mongolia Orkhon-selenge	Dipression	granite	rhyolite-dacite, rhyolite porphyry		Lower Permian			rhyolite-dacite, rhyolitic porphyry?		
5404 Mogoin gol		Metasomatic	Bulgan	49 15 00	103 45 00	North Mongolia Orkhon-selenge	Dipression		andesitic-basalt porphyry?		Permian(P2)			andesitic-basalt porphyry?		
5405 Gangat		Hydrothermal-metasomatic	Bulgan	48 50 00	103 18 00	North Mongolia Orkhon-selenge	Dipression		rhyolite, felsite, andesitic porphyrite		Permian			andesitic porphyrite		
5410 Dashilung(S6)		Metasomatic	Bulgan	49 46 00	104 41 00	North Mongolia Orkhon-selenge	Dipression	granite, granodiorite sandstone			Lower Permian			andesitic, andesitic porphyry		
5411 Zuun tarbagatai		Hydrothermal	Selengi	49 06 00	104 42 00	North Mongolia Tarai-selenge	Dipression				Cambrian	Lower Paleozoic		granite, granodiorite		
5418 Asget uul												Upper Permian		granite		

Table A-2 List of ore deposits, mineral occurrences, and geochemical anomalies in eastern part of the central-north area, Mongolia (14b/15)

No.	Deposit name	Deposit (2)		Grade	Or reserve	Geology	Geochemistry	Geophysics	Trench and pit	Drilling	Report number	Reference	Remarks (surveyed occurrence No.)
		Morphology	Ore mineral										
5385 Nergui	Quartz vein: 45m x0,3m	pyrite, chalcopyrite	Cu-			Prospecting work(1941)*					400		
5386 Nergui	Stipified zone: 200m x50m	malachite	Cu-0,17-0,41			Prospecting work(1971)*					1905		
5387 Bayasgalan-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	malachite, azurite	Cu-2,35%; Ag-3g/t			Prospecting work(1977)					13,2m.cub		2982
5389 Khurtuu	Altered zone: 70m x30m		Cu-3,10%; Ag-0,001g/t									1500	
5390 Khushuut	Altered zone: 300-350m	malachite, azurite	Cu-3,10,0%									1500	
5391 Khavchirga	Ore body: 70sq km	chalcopyrite	Cu-0,05-0,5%; Ag-0,0005%									38,32	
5392 Ubsen sain uul	Quartz vein: 2m x10m	chalcosine, malachite, azurite	Cu-0,1-0,5%									36,24	
5394 Zuun chingelt-21	Quartz-tourmaline vein: 15 x1,5m	malachite, azurite	Cu-0,003-0,5%									36,00	
5398 Tsagaan jalguu bulag	Dispersed frame: 1200m x5000m		Cu-0,5-2,0g/m.cub									31,56	
5400 Khujirin gol	Quartz vein: 6000m x2000m	chalcopyrite, malachite	Cu-0,28-0,74%									24dig	
5403 Urmuu tsagaan nuur	Quartz vein: 11m x0,4m	malachite, azurite	Cu-									283,4m.cub	3538
5404 Mogon gol	Altered zone: 5000m x350m	malachite	Cu-0,11%									24dig	
5405 Gangat	Quartz-epidote vein: 0,1-0,2m	malachite	Cu-0,001-0,009%									2holes	3209
5410 Dashlung(56)	Altered zone: 60m x30m	galena	No-0,03%; Cu-0,01%									3318m.cub	199m
5411 Zuun tarbagatai	Quartz vein: 30m x0,7m	pyrite, chalcopyrite	Pb-0,05%; Au-1,0g/t; Ag-45g/t			Prospecting work(1979)*					1208m.cub		3624
5418 Asgar uul	Quartz vein:		Geological mapping(1979)**			Geological mapping(1982)**					123m.cub		3624

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

(15b / 15)

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			Geophysics	Trench and pit	Drilling	Report number	Reference	Remarks (surveyed occurrence No.)
			Morphology	Ore mineral	Grade						
5437 Narinii am	Ore body: 1-50m x7.6m; Ore body: 150m x1.5m	gold	malachite, azurite	Au-ore body1-1284g/t, ore body2-38.5g/t; Cu-0.2%	Aubody1-Au-366.8kg; ore body2-Au-45.3kg	Geochimistry	Trench and pit	Drilling	5170		
3-2 Saikhan gol	Lenticular body: 1.5-2m; 20m	manganic?		MnO-16.68%	MnO-157000m.cub	Geological mapping(1946)***, Geological mapping(1958)**,	Trench and pit	Drilling	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