

EXPLANATORY NOTES FOR THE
MINERAL RESOURCES MAP
OF
CENTRAL ASIA

1:3,000,000

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Yoji TERAOKA*and Yasushi WATANABE*

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The mineral resources map of Central Asia adjoins the mineral resources map of East Asia published in 2007 and includes the Central Asian and part of the neighboring countries.

The map of Central Asia shows land area deposits of main metallic mineral and non-metallic mineral resources, except for limestone, dolomite, magnesite and construction materials. Uranium is included, although its principal utilization is for nuclear energy. About 2,700 mineral deposits are shown on the map regardless of their status of exploration, exploitation and mined out. However, it was difficult to obtain creditable and detailed mineral deposit information couldn't get from some areas and countries due to their own complicated social and political environments. The map does not, therefore, necessarily represent the present resources figure.

In the mineral resources map, the size of mineral deposits; large, medium and small, are figured, and some sub-economic mineral deposits including mineral occurrences are also plotted on the map in order to indicate a resource potential in individual metallogenic area.

The background geology of the Mineral Resources Map was adopted from the Geological Map of Central Asia (1 to 3,000,000 scale; Teraoka and Okumura, 2007). The geology of the northeastern part of the map was newly added after the publication of the Geologic Map of Central Asia (Teraoka and Okumura, 2007) for this mineral resources map.

The legend of the mineral resources map is the same as the Mineral resources map of the East Asia (Kamitani et al., 2007) and conforms fundamentally to that of the Circum-Pacific mineral resources map (Guild, 1981;

Kamitani et al., 1999). The commodity symbols show the metal or mineral content of the deposits by colored geometric shapes with some modification.

The ten colors and five shapes indicated on the map's legend provide fifty combinations composed of metals and minerals and their associations.

The colors, insofar as possible, indicate metals or minerals of similar type. For example, copper, molybdenum and associated metals (tungsten, lead-zinc and nickel) are orange, precious metals (gold, silver, platinum group metals) and diamond and precious stones are yellow, lead-zinc and associated metals are blue, and tungsten-tin and associated metals are red.

Three sizes of mineral deposits on Table 2 denote the relative importance of the mineral deposits. Definition of the three sizes categories for each commodity are mostly in terms of metric tons of the substances contained before exploitation or an actual output. Some deposits shown by the smallest symbols on this map correspond to mineral occurrences, but they are included because they may help identify and evaluate prospective areas broadly favorable for exploration planning of specific minerals. There are some differences on the deposit size category between this map and Seltmann *et al.* (2001), Shatov *et al.* (2001), Geological Survey of India (2001) and others. Their criteria of the large-sized deposits were frequently adopted, unless the information of appropriate reserve/resource quantity of individual deposit is available.

Eleven deposit types including undifferentiated deposit shown on the map are as follows;

Magmatic and irregular massive deposits: deposits associated with differentiated mafic-ultramafics (Cu-Ni-PGE, Ti-Fe, Cr) , associated with ophiolites (Cr), with anorthosites (P-Ti-Fe) and kimberlites (Dm). Alkaline intrusion related deposits (REE, Apatite-REE, Zr-REE, K), Carbonatite-related deposits (Apatite-REE, REE, Fe-REE, Fe-Ti ± Ta- Nb, Mo, Cu).

Skarn and contact-metasomatic deposits: deposits related to felsic to intermediate intrusions (Au, B, Cu ± Fe, Mo, Sn, W ± Mo, Pb-Zn, Fe, Fe-Zn). Stratified, deposits, usually in carbonate rocks intruded by intermediate to acid igneous rocks are included. They are commonly associated with a hydrothermal stage of mineralization.

Pegmatite and greisen deposits: Crosscutting, pegmatitic and greisenized lode deposits in any type of host rocks and closely related to acidic intrusive rocks (REE-Li, Nb-Ta-Sn ± Be, W-Mo-Be).

Porphyry deposits including stockwork and disseminated deposits: Disseminated deposits in or associated with acidic to intermediate intrusive

rocks (Cu±Au, Cu-Mo, Au, Mo±W, Sn). Some deposits have been described as stockworks and/or disseminated deposits.

Hydrothermal vein and fissure-filling deposits: Crosscutting, epithermal to hypothermal deposits in any type of host rock (Au-Ag, Ag-Pb, Au-As, F, Hg-Sb, Mn, Pb-Zn±Au-Ag/Ba, Cu±Pb-Zn, Sn-W, Hg, U etc.). They are related to mafic to acidic extrusive and intrusive rocks. The major lode of dimensions are transverse to stratification in sedimentary or volcanic hosts.

Stratabound deposits including marine extrusive rock-related massive sulphide, volcanogenic-sedimentary deposits and stratiform/stratabound deposits. Deposits of generally limited horizontal extent occur at more or less the same horizon in stratified rocks (Cu-Zn, Zn-Pb-Cu, Pb-Zn±Cu, Fe, Mn). It may be partly concordant or partly discordant with the enclosing rocks. Some deposits are stratiform with wide lateral extent and syngenetic with enclosing rocks. Examples are iron formation and sedimentary and exhalative copper, lead and zinc deposits. Most massive sulfide deposits belong to this category. Stratiform and stratabound carbonate-hosted Mississippi Valley-type (MSSV) Pb-Zn deposits, sedimentary exhalative Pb-Zn (SEDEX) deposit, barite deposits are related to hydrothermal-sedimentary processes.

Sedimentary deposits including sandstone-hosted deposits: Deposits as massive to disseminated Fe, Mn, Fe-Mn and Cu oxide and carbonate deposits are rigorously confined to one or more layers in sedimentary rocks. Evaporite Na, K, gypsum/anhydrite and phosphorite deposits are usually syngenetic with enclosing rocks. B and Li are concentrated in some lakes and brines.

Metamorphic deposits: Almost graphite deposits are formed by regional metamorphism, contact metamorphism of coaly sediment. Some talc deposits are originated from dolomitic and ultramafic rocks.

Residual deposits: Deposits are formed by surficial chemical concentration. These deposits include nickeliferous laterite, bauxite, uraniferous calcrete and some manganese oxide deposits. The criterion is that supergene processes were responsible for producing ore grade materials.

Placer deposits: Deposits formed by a surficial mechanical concentration. Examples are alluvial and beach placer deposits, such as gold, ilmenite, monazite and diamond.

Mineral deposit numbers are given only for 169 large-sized deposits on the Mineral Resources Map, and all the data including small and medium-sized deposits can be obtained from the home page of the Geological Survey of Japan (<http://www.gsj.jp/Map/EN/overseas.htm>) of the AIST (National Institute of

Advanced Industrial Science and Technology).

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The main metallogeny and the prosperity potential of the metallic mineral deposits of the Middle East region including Iran, Pakistan and Afghanistan were suggested by Dr. J. Hedenquist.

Dr. K. Naito, formerly belonged to the International Geological Cooperation Division, International Department (AIST) promoted the compilation project of the Geological Map and the Mineral Resources Map of Asia. Mineral deposit data sheets of a several Central Asian countries were input by Mrs. S. Miyano and other geologists.

The authors wish to express their deep gratitude for everyone's contribution for preparing the Mineral Resources Map of the Central Asia and neighbouring area.

Table 1 Abbreviation used in the mineral resources map and in Table 3

Commodity	Deposit type and shape	Geologic age
Ag: silver	Alt: hydrothermally altered	Ar: Archean
Al: aluminum	A-mts: alkaline metazomatic	C: Carboniferous
As: arsenic	Bed: bedded	Cm: Cambrian
Au: gold	Brc: breccia	D: Devonian
B: boron	Brn: brine	E: Early
Ba: barium	Ch: carbonate hosted	J: Jurassic
Be: beryllium	Crb: carbonatite	K: Cretaceous
Bi: bismuth	CrI: carlin	K-Tp: Cretaceous-Paleogene
Cd: cadmium	Dis: disseminated	Mz: Mesozoic
Co: cobalt	Evp: evaporite	Mz1: Early Mesozoic
Cr: chromium	Exh: exhalative	Mz2: Late Mesozoic
Cu: copper	Ff: fissure-filling	L: Late
Dm: diamond	Grs: greisen	O: Ordovician
F: fluorite	Hyd: hydrothermal	P: Permian
Fe: iron	Irg: irregular	P-T: Permian-Triassic
Gm: gemstone	Lnt: lenticular	Pt: Proterozoic,
Gp: gypsum	Lyr: layered	Pz1: Early Paleozoic
Gr: graphite	Mas: massive	Pz2: Late Paleozoic
Hg: mercury	Mgm: magmatic	Q: Quaternary
K: potassium	MSSV: Mississippi valley	S: Silurian
Kl: kaolin	Mtm: metamorphic	S-D: Silurian-Devonian
Li: lithium	Mts: metasomatic	T: Tertiary
Mg: magnesium	Pdf: podiform	Tn: Neogene
Mn: manganese	Pgm: pegmatite	TnQ: Neogene-Quaternary
Mo: molybdenum	Pip: pipe	Tp: Paleogene
Na: sodium salt	Plc: placer	Tr: Triassic
Nb: niobium	Prp: porphyry	U: Unclassified
Ni: nickel	Rpl: replacement	
P: phosphorus	Sbl: sublimation	
PGE: platinum group elements	Sed: sedimentary	
Py: pyrite	SEDEX: sedimentary exhalative	
Pb: lead	Sh: sandstone hosted	
Rb: rubidium	Sht: sheet	

Rc: refractory clay	Sil: silicified
REE: rare earth elements	Skn: skarn
S: sulfur	Str: stratabound
Sb: antimony	Stw: stockwork
Se: selenium	U: undifferentiated
Sn: tin	V: volcanogenic
Sr: strontium	VMS: volcanogenic massive sulphide
Ta: tantalum	Vn: vein
Te: tellurium	Wth-res: weathering-residual
Th: thorium	
Ti: titanium	
Tl: talc	
Tn: thenardite	
U: uranium	
V: vanadium	
W: tungsten	
Y: yttrium	
Zn: zinc	
Zr: zirconium	

Table 2 Mineral deposit size used in the mineral resources resources map
Size limits are shown in metric tons of metals or minerals except for diamond and precious gems in carats. Past production and/or reserves totaled.

Commodity	Size	
	Large	Small
Aluminum (bauxite) (Al ₂ O ₃)	> 100,000,000	> 1,000,000
Antimony (Sb)	> 500,000	> 10,000
Arsenic (As)	> 1,000,000	> 10,000
Barite (BaSO ₄)	> 5,000,000	> 50,000
Beryllium (BeO)	> 1,000	> 10
Boron (B ₂ O ₃)	> 10,000,000	> 100,000
Chromium (Cr ₂ O ₃)	> 1,000,000	> 10,000
Cobalt (Co)	> 20,000	> 1,000
Copper (Cu)	> 1,000,000	> 50,000
Diamond (Dm)	> 20,000	> 1,000
Fluorite (CaF ₂)	> 5,000,000	> 100,000

Gold (Au)	200	10
Graphite (fixed C.) (Gr)	1,000,000	10,000
Gypsum-anhydrite (CaSO ₄)	100,000,000	5,000,000
Iron (ore) (Fe)	100,000,000	5,000,000
Kaolin/Refractory clay (ore)	50,000,000	1,000,000
Lead (Pb)	1,000,000	100,000
Lithium (Li ₂ O)	100,000	10,000
Manganese (ore: ≥ 40%Mn)	10,000,000	100,000
Mercury (Hg)	20,000	1,000
Molybdenum (Mo)	500,000	25,000
Nickel (Ni)	500,000	25,000
Niobium-Tantalum [(Nb,Ta) ₂ O ₅]	100,000	1,000
Phosphate (P ₂ O ₅)	200,000,000	1,000,000
Platinum group elements (PGE)	200	10
Potassium (KCl or K ₂ O)	10,000,000	1,000,000
Precious gems (Gm)	20,000	1,000
Pyrite (FeS ₂)	20,000,000	200,000
Pyrophyllite/Pottery stone (ore)	50,000,000	1,000,000
Rare earth with Yttrium (RE ₂ O ₃)	2,000,000	50,000
Silver (Ag)	10,000	500
Sodium (NaCl)	100,000,000	1,000,000
Strontium (Sr)	1,000,000	10,000
Sulfur (S)	100,000,000	1,000,000
Talc (ore)	10,000,000	1,000,000
Thenardite (Na ₂ SO ₄)	100,000,000	1,000,000
Tin (Sn)	100,000	5,000
Titanium (TiO ₂)	10,000,000	1,000,000
Tungsten (W)	50,000	1,000
Uranium (U)	50,000	1,000
Vanadium (V)	10,000	500
Zinc (Zn)	1,000,000	100,000

Table 3 Large size mineral deposits in the mineral resources map.
168 large size mineral deposits are listed based on Table 2

Afghanistan (13 Deposits)		5030	Darrahe Pech	Be, Li, Ta, Nb	Pgm/Vn	K
		5059	Aynak Central	Cu	V-Sed/Bed	Pt
		5088	Bakhund	F, Pb, Zn	Hyd/Lyr-Vn	Tr
		5094	Hajigak	Fe	V-Sed/Bed	Pt
		5118	Pasghushta	Li, Nb, Ta, Sn	Pgm/Vn	U
		5119	Jamanak	Li	Pgm/Vn	U
		5120	Lower Pasghushta	Li	Pgm/Vn	U
		5121	Yaryhgul	Li, Be	Pgm/Vn	Tp
		5122	Drungal	Li, Ta, Nb, Be	Pgm/Vn	U
		5123	Tsamgal	Li	Pgm/Vn	U
		5124	Paskhi	Li	Pgm/Vn	U
		5128	Shamakata Area	Li, Ta, Sn, Be	Pgm/Lnt	Tp
		5129	Taghawlor Pegmatite Area	Li, Be, Ta, Nb, Sn	Pgm/Lnt	Tp
Bhutan (3 Deposits)		5210	Khothakpa	Gp	U	U
		5211	Uri Chu	Gp	U	U
		5212	Khepchishi Hill	Gr	Mtm/Lyr	U
China (42 Dep.)	<i>Gansu</i>	5258	Jintieshan	Fe	Sed/Bed	Pt
		5276	Ta'ergou	W, Be, Bi, Sn	Skn-Hyd/Vn	Pz1
	<i>Nei Mongol</i>	5295	Qiyishan	W, Sn, F	Hyd/Vn-Dis	Pz2
		<i>Qinghai</i>	5316	Tuolugou	Co, Au	SEDEX/Lnt
	5349		Kunteyi Area	K	Evp	T
	5350		Dalangtan Area	K	Evp	Q
	5352		Mahai Field	K, Mg	Evp	Q
	5353		Qarhan Area	K	Evp	Q
	5354		Yiliping	Li, B	Evp	Q

	5355	Taijiernaier Salt	Li, B	Evp	Q
	5357	Keke	Na	Evp	Q
	5358	Chaka	Na	Evp	Q
	5361	Xitieshan	Pb, Zn	V-Sed/Lyr	Pz1
	5376	Dafenshan	Sr	U	T
	5377	Chahansilatu	Tn	Evp/Bed	Q
<i>Tibet</i>	5406	Zabuye	B, Na, K, Li	Evp/Bed	Q
	5411	Duobuza	Cu, Au	Prp	K
	5418	Bangpu	Cu, Pb, Zn	Skn	Tn
	5421	Jiama	Cu, Pb, Zn	Skn	Tn
	5422	Zunuo	Cu, Ag	Prp	Tn
	5424	Chongjiang	Cu, Au, Ag	Prp	Tn
	5425	Qulong	Cu	Prp-Skn	Tn
	5429	Tinggong	Cu	Prp	Tn
	5432	Zhibula	Cu, Pb, Zn	Skn	Tn
	5442	Danqu	Fe	Hyd/Lnt	J
	5445	Nyixung	Fe, Cu	Skn/Irg-Lnt	K
	5465	Maergaicaka	Na, Tn	Evp	Q
<i>Xinjiang</i>	5554	Qunkur	Be, Ta, Nb	Pgm/Vn	Pz2
	5558	Askart	Be	Pgm-Grs/Lnt	Pz2
	5562	Koktohai/Keketuo hai	Be, Li, Nb, Ta	Pgm/Vn	Pz2
	5565	Ashele	Cu, Pb, Zn, Au	Vol/ Mas	D
	5568	Karatungke	Cu, Ni	Mgm/Lnt-Vn	Pz2
	5578	Tuwu	Cu, Au, Ag	Skn-Prp	Pz2
	5579	Yandong	Cu	Prp	Pz2
	5592	Kumutag	Fe, Gp	V-Sed/Bed	Pz2
	5597	Tianhu	Fe	Sed/Bed	Pt
	5601	Cihai	Fe	Hyd-Rpl/Lnt	Pz
	5614	Uyongbulak	Na	Evp	Q
	5615	Awart	Na	Evp	Q
	5616	Lop Nur	Tn, Na	Evp	Q
	5629	Hoxbulak	Pb, Zn	SEDEX/Lnt	D
	5632	Kaktale/Keketale	Pb, Zn, Ag	SEDEX/Bed	D

India (3 Deposits)	5665	Khetri	Cu, Au	V-Sed/Ln		
	5709	Chandradinga Hill	Fe	Sed/Bed	Pt	
	5747	Islamabad & Dhansaiy	Gr	Mtm	U	
Iran (12 Deposits)	5876	Reza	Cr	Mgm/Pdf	K	
	5877	Shahriar Shahin	Cr	Mgm/Pdf	K	
	5913	Meiduk Lachar	Cu, Au, Ag, Mo	Prp	U	
	5920	Sarcheshmeh	Cu, Mo, Au, Ag	Prp	Tn	
	5978	Chador Malu	Fe, P	Mgm/Pip	LPt	
	5982	Choghart	Fe, P	Mgm/Pip	LPt	
	5993	Neyshabur	Gm/Tq	Pgm-Hyd/Irg	U	
	6043	Shahrokh	Mn	U	U	
	6156	Siahkuh	Pb, Zn	Hyd/Rpl	U	
	6172	Mehdiabad	Pb, Zn, Cu, Ag	MSSV	U	
	6211	Iran Kuh/Esfahan	Zn, Pb, Ba	Hyd/FF	K	
	6216	Kushk	Zn, Pb	SEDEX	Cm	
Kazakhstan (33 Dep.)	<i>Central</i>	6221	Vasilkovskoe	Au, Sb, As	Skn-Hyd	Pz1
		6299	Bozshakol	Cu, Mo, Au	Prp	Pz1
		6311	Dhilandinskiy Group	Cu	Sed/Bed	Pz2
		6325	Zhezqazgan	Cu	Sed/Bed	Pz2
		6331	Kounrad/Qonyrat	Cu, Mo	Prp	Pz2
		6333	Zhaman-Aibat	Cu	Sed/Bed	Pz2
		6362	Koktenkol	Mo, W, Bi, Cu	Hyd/Vn-Stw	Pz2
		6365	Zhanet	Mo	Hyd/Vn-Stw	Pz2
		6377	Zhairem	Pb, Zn	SEDEX	Pz2
		6387	Syrymbet	Sn, Bi, Mo, Be	Hyd/Vn-Stw	Pz1
		6388	Donetskoe	Sn, Bi, Mo, Be	Hyd/Vn-Stw	Pz1
		6405	Kosachinoe	U	Hyd/Vn	U

	6432	Verkhnee Qairaqty	W, Mo, Bi, Be,	Hyd/Vn-Stw	Pz2
	6435	Batystau	W, Mo	Hyd/Vn-Stw	Pz2
	6437	Akshatau	W, Be, Mo, Bi	Hyd/Vn-Stw	Pz2
<i>East</i>	6458	Bakyrchik	Au	Hyd/Ff	Pz2
	6470	Vasilievskoe	Au	Hyd/ Dis	U
	6525	Nikolaevskoe	Cu, Zn	V-Sed/Mas	D
	6533	Aktogai	Cu, Mo, Au, Ag	Prp	Pz2
	6535	Koksai	Cu, Mo	Prp	U
	6540	Orlovskoe	Pb, Zn, Cu	VMS	Pz2
	6553	Tishinskoe	Pb, Zn, Cu	VMS	Pz2
	6557	Maleevskoe	Pb, Zn, Cu	VMS	Pz2
	6559	Zyryanovskoe	Pb, Zn, Cu	VMS	Pz2
<i>South</i>	6637	Mynkduk	U	Sed/Sh	K
	6639	Inkai/Chu-Sarysum	U	Sed/Sh	T
	6643	Muiunkum	U	Sed/Sh	T
	6648	North Kharasan	U	Sed/Sh	T
<i>West</i>	6690	20 Let Kaz SSR	Cr	Mgm/Lnt	Pz2
	6697	Benkala North	Cu, Mo	Prp	U
	6702	50 Let Octyabrya	Cu, Zn	V-Sed/Mas	U
	6721	Dorozhilovskoe	Mo	Hyd/Vn-Stw	U
	6724	Dzhaksyklych	Na	Evp	Q
Kyrgyz (12 Deposits)	6748	Sandik	Al	Mgm	Pt
	6751	Zardalek	Al	Mgm	U
	6772	Kumtor	Au	Hyd/Lnt-Stw	Pz2
	6796	Kolesai	Be	Hyd/Ff-Stw	U
	6797	Uzun-Tash	Be	Skn/Lnt-Stw	S
	6809	Kuru-Tegerek	Cu, Au, Mo	Skn	U
	6811	Bala-Chichkan	Fe, Ti, V	Mgm	O
	6816	Dangy	Fe	Sed/Lyr	LPt
	6828	Chonkoy	Hg	Hyd/Ff-Dis	U
	6838	Chauvai	Hg, Sb	Hyd/Ff-Dis	U

		6845	Khaidarkan	Hg, Sb	Hyd/Vn-Dis	U
		6940	Trudvoye	Sn, W, F	Skn-Grs	P
Mongolia/West (8 Deposits)		6972	Beltesin Gol	Al	Mgm/Mas	Pt-Cm
		6988	Khaltar Uul II	Au, Ag	Hyd/Ff	U
		7044	Huh Adar/Khu Adar	Cu, Zn, Pb	Hyd	U
		7083	Bagatsaan Gol	Mn, Fe	V-Sed/Lnt	Pt-Cm
		7115	Hubsugul	P	Sed/Bed	Pt
		7137	Hitagiin Gol	V, Fe	Sed/Bed	Cm
		7139	Achitnuul	W, Be, Sn	Grs/Vn-Stw	Pz2
		7151	Dulaan-Khal-Uul	Zn, Pb, Au, Ag	Hyd/Vn-Lnt	Pz2
Pakistan (3 Deposits)		7262	Saindak/fort Saindak	Cu, Mo	Prp	Tn
		7264	Reko Diq	Cu	Prp	Tn
		7301	Dera Ghazi Khan	Gp	Sed/Bed	Tp
Russia (18 Dep.)	<i>Siberia</i>	7376	Kharlinskoye	Al	Mgm/Mas	Pz1
		7377	Bayan-Kol	Al	Mgm/Mas	D
		7378	Dahu-Murskoye	Al	Mgm/Mas	S-D
		7401	Kharlovskoye	Fe, Ti, V	Mgm/Lyr	U
		7402	Karasugskoye	Fe, REE	Mgm/Crb	K
		7403	Chesnokovskoye	Fe	Skn/Lnt	U
		7404	Inskoye	Fe	Skn/Mas-Dis	Pz
		7412	Kholzunskoye	Fe	V-Sed/Bed	D
		7414	Kalgutinskoye 2	Fe	V-Sed/Lnt	D
		7433	Akalakhinskoye	Li, Ta, Nb, REE	Mgm-Pgm/ Mas-Vn	U
		7436	Malo-Oinogorskoye	Mo	Prp	J
		7454	Ulug-Tanzek	Ta, Nb, REE	Mgm/Dis	U
		7470	Dzhidinskoye	W, Mo	Hyd-Grs/Vn	T
		7475	Kalgulinskoye	W, Mo	Grs/Vn-Stw	U
	7479	Korbalihinskoye	Zn, Pb, Cu	Str/Mas	D	
		<i>Ural</i>	7507	Sibai	Cu, Zn, Au, Ag	Str/Mas
		7513	Podolskoe	Cu, Zn	Str/Mas	D

	7515	Gaiskoe	Cu, Zn	Str/Mas	D
Tajikistan (7 Deposits)	7550	Adrasmanskoye	Ag	Hyd/Vn-Stw	U
	7575	Akarkhar	B	Skn	U
	7576	Baritovaia Gorka	Ba	Hyd/Vn	U
	7577	Akmogol	Ba	Hyd/Vn	U
	7584	Chokadambulak	Fe, Pb	U	U
	7596	Jezhikrut	Sb, Hg	Str/Lyr	U
	7600	Chorukh-Dairon	W, Mo	Skn	U
Uzbekistan (14 Deposits)	7612	Actepe/Aktepe	Ag, Co, Ni, Pb	Hyd/Vn-Stw	P
	7616	Kokpatash	Au, Ag	Hyd/Stw	U
	7618	Muruntau	Au, W	Skn-Hyd/Dis	P
	7620	Daughyztau	Au, Ag	Hyd/Vn-Dis	U
	7634	Zarmitan	Au	Hyd/Vn	U
	7642	Dalnee	Cu, Mo, Au	Prp	U
	7643	Kalmakyr	Cu, Mo, Au	Prp	Pz2
	7667	Uchkulach	Pb, Zn	Str/Mas	U
	7668	Khandizin	Pb, Zn, Cu	VMS	U
	7677	Uchkuduk	U	Sed/Sh	T-Q
	7680	Aktau	U	Sed/Sh	T-Q
	7681	Sugraly	U	Sed/Sh	T-Q
	7695	North Bukynay	U	Sed/Sh	T-Q
	7710	Sarytau	W	Skn-Hyd/Stw	U

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