

Curriculum Vitae

PERSONAL DETAILS

Name:

Sergey Mstislavovich Ivanov

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Date of birth: 17th of March 1971

Citizenship:

Kyrgyz Republic (no visa needed for
traveling within the CIS)
Canada (landed immigrant)

Marital status: Single

Languages:

Russian (native)
English (fluent)
Kyrgyz (some working knowledge)

Interests:

Hunting, sighthounds, World and Russian
history, travel, and sports (jogging, hiking,
horseback riding, swimming, basketball,
biking, and soccer)

PROFESSIONAL SUMMARY AND GOAL

- An economic geologist, with industrial and academic backgrounds, and experienced in regional through to detailed geological mapping and prospecting in Kyrgyzstan (FSU) for gold, base metals, copper-porphyry, and uranium. Involvement in exploration and exploitation processes of a metasedimentary-hosted lode gold deposit. Specialized in study of orogenic and intrusion-related gold mineralization.
- Geological mapping at different scales, interpreting of geological structure, volcanic and sedimentary successions, igneous and metamorphic formations, design and conduction of geochemical surveys and trenching programs, geochemical, petrological and mineralogical studies, data processing and analysis (including computer-aided), prospect evaluation and target selection, project and report generation.
- Experience of work in remote woodland, high-altitude mountainous, and semi-desert terrains. Committed, versatile, and enthusiastic, with a family history of the “geology disease”.
- The goal is to contribute to the discovery of hydrothermal economic mineralization through integration of scientific knowledge and best practice principles.

WORK HISTORY

January 1998-Present Graduate Student (PhD candidate)	<i>Place</i>	Department of Geological Sciences University of Saskatchewan
	<i>Project</i>	<i>Evolution of Hydrothermal Fluids at the Kumtor Lode Gold Deposit, Kyrgyzstan</i>

Mapped the developing open pit and immediate area during three field seasons

- Mapped lithological units, faults and other structural features
- Established spatial distribution and relationships of different compositional and textural types of mineralization, their correlation to ore grades and relationships to faulting, lithology, and structure
- Analyzed core drilling, audit, and blast hole geochemical data
- Examined diamond drilling core; logged in and sampled some intervals
- Interacted with the mine geologists and ore control;
 - Developed and suggested a legend for bench face mapping
 - Delivered an oral presentation on the Geology of the Kumtor Lode Gold Deposit before the mine geologists

Established history of vein and mineral formation (mineral paragenesis)

- Discriminated barren/auriferous vein and alteration suites
- Conducted a detailed petrologic and mineralogical study of gold-bearing ore: composition, textures, and modes of gold occurrence.
- Used transmitted & reflected light and backscattered electron microscopy and microprobe analysis

Studied geochemistry of auriferous mineralization

- Employed electron microprobe, stable isotopes, fluid inclusions, and chemical modeling
- Preliminarily constrained fluid evolution and the conditions and mechanisms of gold deposition

Studied reports on the Kumtor in archives

- Compiled information on regional and local geology of the Kumtor deposit from reports in the archives of the State Agency for Geology and Mineral Resources Protection of the Kyrgyz Republic.

Teaching assistantship in the following courses:

- *Metalliferous Mineral Deposits (4th year course)*
- *Advanced Mineralogy (2nd year course)*
- *Flin-Flon Geological Mapping Field School (3rd year course)*

Selected referred publications and presentations

- Ivanov, S. M. and Ansdell, K. M. 1998. Vein paragenesis at the Kumtor gold deposit, Central Tien-Shan, Kyrgyzstan. Abstracts with programs. GSA1998 annual Meeting.
- Ansdell, K., Abeleira, A., and Ivanov, S. 1999. Structural evolution and vein paragenesis at the Kumtor gold deposit. In: Stanley, C.J. (Ed.) Mineral deposits: From processes to processing.
- Ivanov, S. and Ansdell, K. 2000. Constraints on the fluid evolution at Kumtor gold deposit: textural relationships and stable isotopes. Abstracts and programs, GSA 2000 annual meeting.
- Ivanov, S., Ansdell, K., Melrose, D. 2000. Ore texture and stable isotope constraints on ore deposition mechanisms at the Kumtor lode gold deposit. Gold in 2000. Poster session Extended Abstract Volume.

Selected non-referred publications and presentations

- Ansdell, K.M., Abeleira, A., and Ivanov, S. 1998. Summary of Cameco-NSERC research on the Kumtor gold deposit, Kyrgyzstan. A report submitted to Cameco Corporation.
- Vein Paragenesis at the Kumtor lode gold deposit. 1998. An oral presentation for the Cameco Gold staff in Toronto.
- Geology of Kumtor: Structural, geochemical and mineralogical constraints. 1999. An oral presentation before the mine geologist at the Kumtor Mine Site.

Awards and Scholarships

University of Saskatchewan PhD Graduate Scholarship	\$16,500 p/a	09/1999-present
The Geological Society of CIM Wolfgang Stoeterau Memorial Scholarship	\$1000 extraordinary	03/2001

July 1993- August 1997 Geologist (junior 07/93-08/96, senior 08/96-08/97)	<u>Place</u>	North-Kirgiz Geological Expedition (NKGE) of the State Agency for Geology and Mineral Resources Protection
	<u>Projects</u>	(07/93-08/97) <i>Geology and Mineral Resources of the Upper Chong-Kemin Valley</i> (mapping and prospecting project) (03/95-08/97) <i>Prospecting and exploration for auriferous mineralization in the Kemin region</i>. Contract with the Altyn-Too Kyrgyz (NKGE)-Canadian (Teck Corp.) Joint Venture

Regional (1:50,000) through to detailed (1:5,000) geological mapping

- Was one of the five principal authors of the 1:50,000 scale map of a 1,350 km² geologically complex terrain, (the Chong-Kemin Valley, Northern Kirgizstan) which consists of sedimentary, volcano-sedimentary successions and metamorphic and plutonic formations of various ages.
- Specialized in the study of metamorphic and magmatic formations:
 - Contributed to unraveling of metamorphic and magmatic histories of the area using crosscutting and overprinting relationships among magmatic+metamorphic formations and sedimentary+ volcano-sedimentary successions along with radioisotopic geochronology
 - Used petrologic and geochemical constraints for discrimination and geodynamic interpretation of magmatic and metamorphic formations
 - Studied the relationships of magmatic and metamorphic formations to metalliferous mineralization (particularly, precious metals)
 - Wrote the chapter *Magmatic and Metamorphic Formations* in the final project report.
- Drafted detailed (1:10,000-1:5,000 scale) maps focused on the areas with key geological relationships (intrusive contacts, disconformities, multiple deformation episodes present etc.)
- Used remote sensing (aero and space imagery) and regional geophysical survey (magnetic susceptibility, gravimetric, gamma) data for mapping and interpretations of geological structure
- Studied geomorphology of the Chong-Kemin Valley
 - Used aero photos for drafting geomorphological and quaternary deposits maps of the mountainous terrain
 - Wrote the chapter *Geomorphology* in the final project report.

Regional through to detailed prospecting and exploration for metalliferous mineralization

- Was involved in selection of target areas for prospecting for auriferous mineralization
 - Examined the precursors' data: geochemical surveys, prospecting, geophysical and geological reports and maps
 - Selected target sites for carrying out detailed geochemical surveys, trenching, and mapping programs
 - Designed and supervised geochemical and mineralogical surveys (soil, stream & grids, core)
 - Supervised and coordinated the activity of 3 to 10-person geochemical/mineralogical survey teams
 - Liaison with geochemical laboratory: shipping samples, obtaining results, conducting control of analyses quality
 - Processed geochemical surveys data
 - Statistically processed analytical data, defined threshold values for geochemical anomalies (separate pathfinder elements, additive and multiplicative approaches)
 - Analyzed the significance of the anomalies, gave their geological interpretation
 - Selected targets for further detailed study (mapping, core sampling and trench programs)
 - Drafted geological maps and plans (1:10,000 to 1:2000 scale) of mineralized areas
 - Designed and mapped trenches and pits
 - Wrote chapters on geology (Stratigraphy, Tectonics, Magmatism) of prospective areas and geological settings of mineralization in the report *Prospecting and exploration for auriferous mineralization in the Kemin region* for the Altyn-Too Kirgiz-Canadian joint venture.
- Designed, developed, and maintained computer-aided storage and processing of geological data***
- Designed and maintained databases (DBaseIII, Microsoft Access) for the storage and processing of geochemical survey, petrologic, stratigraphic and mineralization occurrence data
 - Digitally drafted geological maps and sections, constructed maps of geochemical anomalies

June-August 1992 Geological Technician	<u>Place</u>	North-Kirgiz Geological Expedition (NKGE) of the State Agency for Geology and Mineral Resources Protection
	<u>Project</u>	<i>Prospecting & exploration for copper-porphyry mineralization</i>

Training-in-industry course after the 4th year in University

- Mapped, sampled and carried out gamma-survey of trenches
- Drafted maps and plans of mineralized areas
- Collected data for the Diploma Project
 - Geologically mapped the surface of a part of the Andash copper-porphyry deposit
 - Mapped and sampled mineralization and alteration areas
 - Compiled drill core and audit data on the First Ore Body of the Andash copper-porphyry deposit
- General work in the field camp

June-September 1991 Field Assistant/ Geological Technician	<u>Place</u>	The Yurasskaya Geological Expedition, the “Arkhangelsk-geologiya” Concern, Archangel City, North-Western Russia
	<u>Project</u>	<i>Regional mapping & prospecting for kimberlite occurrence</i>

Training-in-industry course after the 3rd year in University

- Geologically mapped Quaternary and Permian sediments within the Russian Platform
- Gathered stream sediment geochemical and mineralogical samples
- Documented pits
- General field work

June-September 1991 Field Assistant	<u>Place</u>	North-Kirgiz Geological Expedition, State Agency for Geology and Protection of Mineral Resources
	<u>Project</u>	<i>Regional mapping & prospecting for auriferous, base-metal, and uranium mineralization in the Ak-Shiyrak and Kuylu ridges</i>

Geological mapping & training-in-industry courses after 2nd year in University

- Geochemical and mineralogical survey (soil and core, stream and grids)
- Sampled trenches (channel and rock chips)
- Geologically mapped a 2km*3km area (1:25,000 scale)
- Sampled areas of auriferous vein mineralization
- General field work

Summer 1987 Field Assistant	<u>Place</u>	North-Kirgiz Geological Expedition, State Agency for Geology and Protection of Mineral Resources
	<u>Project</u>	<i>Regional mapping & prospecting for auriferous, base-metal, and uranium mineralization in the Kyrgyz Ridge, the Tien-Shan</i>

Summer job after 9th grade in high school (age 16); the first experience of work in geology

- Geochemical and mineralogical survey (soil and core, stream and grids)
- Sampled trenches (channel and rock chips)
- General field work

Summers 1977-86	<u>Place</u>	North-Kirgiz Geological Expedition
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Visiting parents in summer field camps from the age of 6 through 15

- General work in the field camp, including bugging the geologists by bringing them various samples of Fool's gold and asking numerous stupid questions.

EDUCATION

January 1998- Present	<u>Place</u>	Department of Geological Sciences University of Saskatchewan
PhD candidate (in progress)	<u>Thesis Project</u>	<i>Fluid Evolution at the Kumtor Lode Gold Deposit, Kirgizstan</i>

September-December 1997- ESL Student	<u>Place</u>	English as a Second Language School Extension Division, University of Saskatchewan
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July 1988- July 1993	<u>Place</u>	Department of Mining and Geology Kyrghyz Technical University
B.Sc.	<u>Diploma Project</u>	<i>Preliminary Exploration of the First Ore Body of the Andash Copper-Porphyry Deposit, which contained a research section: Origin of the Copper- Porphyry Hydrothermal System</i>

RELEVANT SKILLS AND EXPERIENCES**Computer skills**

Operating systems, networking	Windows 95,98,NT, MacOS, basics of Unix (Solaris and Linux)	
GIS (2D & 3D geological & geochemical maps). Databases and linking to digital maps	AutoCadMap, Surfer, ArcView, CorelDraw, Microsoft Access, SQL, basics of GemCom and MapInfo	
Geochemistry, chemical modeling	MinPet, NewPet, FO2PH	
Structural data analysis	Dips, SpheriStat, StereoNet	
Graphics processing	vector	AutoCad, CorelDraw, Canvas, Freehand
	raster	CorelPhotoPaint, AdobePhotoShop, PaintShopPro
Programming language	Essentials of Visual Basic, SQL, Fortran	
General	Microsoft Office, Corel Office, Web design, FTP, Telnet	

Teaching experience

- Assisted in teaching courses *Metalliferous Mineral Deposits* and *Advanced Mineralogy*
- Assisted in a geological mapping field trip
- Trained university students in trench and pit documenting, geological mapping
- Trained workers in geochemical survey teams in using aerophotos+topomaps for orientation, taught basics of geology to workers involved in sampling, and those simply interested in geology

Generally useful skills, experiences, and qualities

- Many-season experience of living and working in field conditions in different terrains:
 - High-altitude mountainous, up to 5000 m, or 16400 ft a.s.l. (Kyrgyzstan)
 - Semi-desert mountainous with shortage of water (Kyrgyzstan)
 - Remote woodlands and marshes (Northwestern Russia)
- Have used the following means of transportation while working in the field:
 - Two feet, trucks, horseback, inflatable boats, helicopters (the latter as a passenger)
- Basics of rock climbing
- Adapted to geological lifestyle from very early age: both parents are geologists

REFERENCES AVAILABLE UPON REQUEST

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