Plan Overview

A Data Management Plan created using DMPonline

Title: Mapping the Chu Sarysu Basin

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Template: Health Research Board DMP Template

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Project abstract:
Using publicly-available satellite imagery imagery to produce a geological map of the Paleozoic Chu Sarysu basin, Kazakhstan. The data produce a new geological map which highlights key structural trends, and how these structures controlled sedimentation from the upper Devonian to Permian across the northern portion of the basin. The study elucidates the structural and stratigraphic controls on sediment-hosted stratiform copper mineralisation in the basin. The largest deposits are the Dzhezkazgan (20Mt Cu metal) and the Zhilandy trend deposits. Understanding fluid flow pathways in the basin is key to discovering new resources in the basin.

ID: 170108

Start date: 01-07-2023

End date: 31-01-2024

Last modified: 07-02-2025

Copyright information:

Mapping the Chu Sarysu Basin

Data description and collection or re-use of existing data

How will new data be collected or produced and/or how will existing data be re-used?

Satellite imagery (Google and Bing maps) will be viewed in QGIS 2D mapping software. Formlines (i.e. bedding traces) will be digitised first and then faults, fractures and joints will be digitised. Polylines of structures will be attributed with key data such as age, generation, dataset, and other comments. A solid geology interpretation layer (polygons) will be created, and attributed by age.

What data (for example the kind, formats, and volumes), will be collected or produced?

Formlines (bedding) and structures (faults, joints, fractures). Field observations and structural measurements from outcrops.

Documentation and data quality

What metadata and documentation (for example the methodology of data collection and way of organising data) will accompany data?

Formlines - none.
Structures - generation, age, dataset.

What data quality control measures will be used?

Not applicable.

Storage and backup during the research process

How will data and metadata be stored and backed up during the research process?

Structural data saved on PC and constantly backed-up to iCRAG Google Drive.
Field data recorded in field notebook which wll be photographed daily and uploaded (synced) with iCRAG Google Cloud. Data will be digitied back at UCD. Field photos will be backed-up (synced) with iCRAG Google Cloud over WiFi at the end of every field dat upon return to camp or hotel.

How will data security and protection of sensitive data be taken care of during the research?

PC and phones used VPNs, all devices password protected. Notebook will be kept on person but if stolen, the data are not valuable to third parties.

Legal and ethical requirements, codes of conduct

If personal data are processed, how will compliance with legislation on personal data and on security be ensured?

Not applicable.

How will other legal issues, such as intellectual property rights and ownership, be managed? What legislation is applicable?

Data contributed by the sponsor, including airborne hyperspectral data, we remain property of the sponsor. The project is being extended and its scope enlarged. While the project remains active, the GIS outputs will be emargoed. When both parties agree the project is finished and complete, the data will be openly accessible and used in publications.

What ethical issues and codes of conduct are there, and how will they be taken into account?

We will be accessing private property and indiginous lands. We have full exploration tenure through our sponsor company, letters from the Kazakhstan Ministry of Mines, and speak to local landowners and hearders before accessing each field area.

Data sharing and long-term preservation

How and when will data be shared? Are there possible restrictions to data sharing or embargo reasons?

The interpretations of the data highlight areas that are prospective for mineral exploration. As such, they are commercially sensitive and highly valuable to the sponsor company and their competitors. The Kazakhstan Mininistry of Mines is releasing exploration prospecting licences over the next 2 years. Once the sponsor company has had exclusive use of the IP, to bid for prospecting licences, the data will then be made publicly available and the results will be published in journals.

How will data for preservation be selected, and where data will be preserved long-term

(for example a data repository or archive)?

On the iCRAG file servers. The data will be accessible to other researchers and mineral explorers in the Chu Sarysu basin.

What methods or software tools are needed to access and use data?

A GIS program for the 2D shapefiles, such as MapInfo, Arc or QGIS.   3D models will require Leapfrog (Geo or Viewer) or a similar system such as AutoCAD, Surpac, Micromine or Vulcan.

How will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured?

To be determined.

Data management responsibilities and resources

Who (for example role, position, and institution) will be responsible for data management (i.e. the data steward)?

The iCRAG data manager, currently Brendan Kenna.

What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?

To be determined.