
ARTIC OCEAN
Karstifiable rocks
(potential karst aquifer)
Continuous carbonate rocks
Discontinuous carbonate rocks
Mix carbonate and evaporite rocks
WOKAM database;
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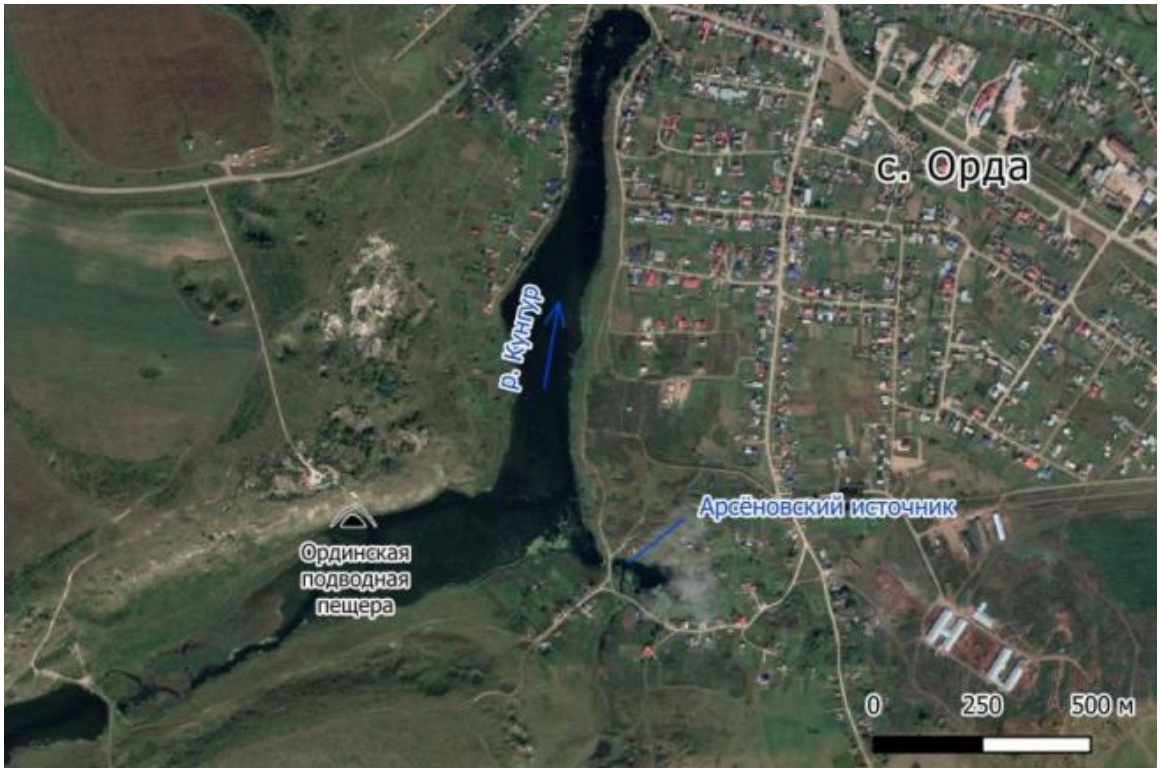
R U S S I A
Arsenovsky spring
KAZAKHSTAN
Cerik Kel
MONGOLIA
ATLANTIC OCEAN
CHINA
JAPAN
0
2,100
4,200
Km

| Country | MIKAS springs | Coordinates / Nearby City | Spring discharge (Q in l/s,min/av/max) / tapped or not | Criteria* in order / Main justification */ H-historic, A-aesthetic, S-scientific, E-Economic, Ec-ecologic | Data collected by |
|---|---|---|---|---|---|
| **Russia**  | 1. **Arsenovsky spring** | N 57°10'50.7" E 56°53'47.7" Z = 145 m asl<br><br>Perm region, Orda Municipality, Kungur River basin | 300/-/390<br><br>Not tapped | ***A, Ec, S***<br><br>*Vauclusian (Lake) spring located at intensively karstified Ufa plateau where the density of karst features reaches 160 forms/km$^2$. Dominant rocks are evaporitic – gypsum, anhydrite, which result with sulphate-calcium chemical composition of water. Mineralization of water is 2.2 g/l. The lake is 200x60 m, with a maximum depth of 5-7 m. At the bottom of the lake there are numerous funnels from which spring waters gush out. The water is clean, transparent (visibility 15-30 m), turquoise in color, cold all year round (t +5-6 $^0$C). It replenishes the waters of the Kungur River, supporting the ecosystem of a unique natural area of the Perm Territory, called the Kungur forest-steppe. Nearby located is the famous Orda underwater cave. Spring area has a great tourist potential, especially for scuba diving.* | Maksimovich N. G., Meshcheriakova O. Yu, Gubina E. V. |
| | 2. **Cerik-Kel (Blue lake)** | N 43°13'56.33" E 43°32'19.05" Z = 805 m asl<br><br>Kabardino-Balkarian Republic, Babugent village, Cherek River basin | ? / 800 / ?<br><br>Not tapped | ***S, Ec, A***<br><br>*Vauclusian (lake) spring issuing from the Upper Jurassic limestones and dolostones, with some chalk deposits around. Karst siphon is 279 m deep makes this underwater abyss one of the deepest in the world. Water temperature is c. 11$^0$C, mineralization 500-650 ppm, with presence of $H_2S$ coming from the deep depth. This is a touristic area with large potential for further development. Water of karst spring sustains ecosystem, maintain the baseflow of river Cherek and fill downstream located Babugent reservoir.* | Maksimovich N. G., Meshcheriakova O. Yu, Gubina E. V. |

## MIKAS – Arsenovsky spring



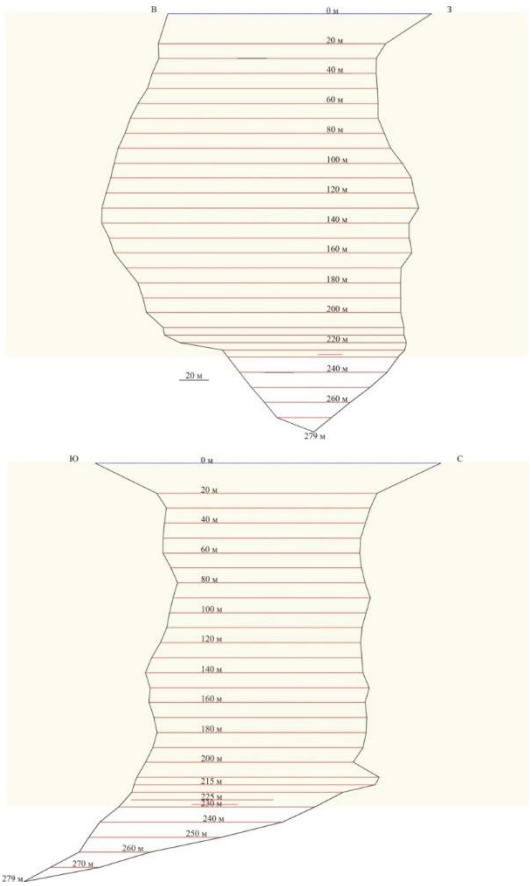

*Location of the Aresnovskiy spring Perm Region*

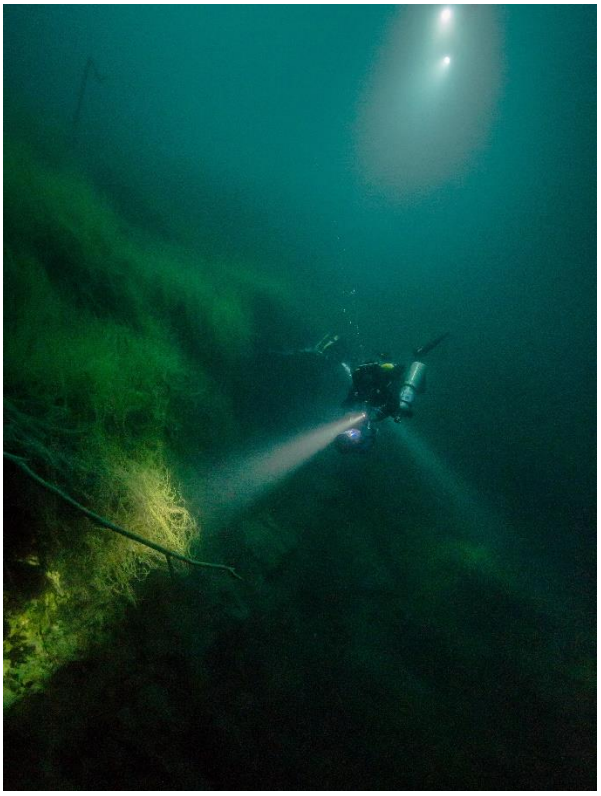
*View of the Kungur River valley and Arsenovsky spring (photo: N.G. Maksimovich).*

*Diving in reservoir filled by Arsenovsky spring water (https://tritonural.ru/arsenovskiy-istochnik-udivitelnoe-ryadom/ ).*

## MIKAS – Cerik Kel (Blue Lake)

*Aerial view on Cerik Kel spring and lake (siphon) sections*





*Underwater space (photo by Underwater Research Center of the Russian Geographical society)*

*Outflow of Cerik Kel*

*Cerik-Kel Blue lake (photo by N.G. Maksimovich)*