

Table ESM 22. Pb-isotope data for sulphides with gold mineralization of deposits and ore occurrences in the Polar Urals

Ore occurrence/deposit	Sample	Mineral	$^{206}\text{Pb}/^{204}\text{Pb}$	$^{207}\text{Pb}/^{204}\text{Pb}$	$^{208}\text{Pb}/^{204}\text{Pb}$	Sample characteristics
Nephritovy Waterfall, Rai-Iz	RI-1	sphalerite	18.1323	15.5430	37.5841	Fragment of quartzous metavolcanics with a densely disseminated minerals of polysulphide association (Copperpyrrhotite + chalcopyrite + sphalerite)
Novogodnee-Monto	NM-34	galena	17.8354	15.5289	37.6378	Quartz vein fragment with sulphide dissemination. Gold-polysulphide association with gold and silver tellurides. Native gold localizes along microcracks in sulphides
Karyernoe	14-20A	pyrite	17.7904	15.5081	37.6008	Volcanogenic-terrigenous rocks with pyrite dissemination and quartz lenses
	14-43	pyrite	17.8505	15.5210	37.6432	Tuffs with reticulated quartz veins and sulphide phenocrysts both in veins and in the tuff matrix with basic composition
Podgornensky area	A3-10-196	pyrite	17.8813	15.5367	37.6957	Fragment of chalcedonic quartz vein of eutaxitic structure with linear localized sulphide along the contact
	A3-12-19	pyrite	17.8854	15.5396	37.7008	The same
	A3-18-19	pyrite	17.8792	15.5384	37.6951	The same