Malmyzh Cu-Au porphyry – Flagship discovery in an emerging porphyry-epithermal belt in the Russian Far East.

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The East Sikhote-Alin metallogenic belt is an emerging copper-gold province in the Russian Far East, characterized by numerous epithermal and porphyry-type deposits and prospects. This belt of mineral deposits can be traced from the Amur River mouth in the north, 1600 kilometres to the south. Commencement of this important metallogenic event is believed to be synchronous with a switch from an active transform margin to Andean-type arc magmatism in the Late Cretaceous.

The Malmyzh deposit cluster is conveniently located 220 kilometres northeast of the city of Khabarovsk and is the first truly world class porphyry discovery in the belt. The Malmyzh system consists of a multiple Cu-Au mineralized porphyry centers focused along a northeast trending, 16 x 5 kilometre intrusive corridor of multi-phase dioritic to granodioritic stocks that intruded and altered a 12 kilometre thick sequence of Early Cretaceous turbidites. The turbidites were accreted and consequently deformed, onto the Asian continental margin during the Early Cretaceous. Recent geochronology supports the emplacement of syn-mineral causative intrusive phases near the beginning of the Late Cretaceous, just as the switch to Andean-type magmatism was occurring.

Copper-gold mineralization, principally hosted in porphyritic diorites and silica-magnetite-biotite altered sandstones and siltstones, consists of near-surface chalcocite (at 10-70 meters from surface) that transitions to primary chalcopyrite and chalcopyrite-bornite-magnetite mineralization. Mineralization extends from subcrop (~1-50 meters) to >400-850 metres depth. Higher grades are associated with biotite-magnetite and chlorite-magnetite alteration and quartz vein stockwork.

Project drilling, totalling ~84,000 meters from 236 holes, has confirmed 15 porphyry Cu-Au targets within the Malmyzh district. As reported using western standards, the deposits have combined open pit constrained inferred resources of 1.66 billion tonnes averaging 0.34% Cu and 0.17 g/t Au, or 0.42% CuEq.