

PRESS RELEASE

TSX Venture : MAT

Matamec has completed the re-sampling of 8 other trenches

Montreal, December 22, 2009 - Matamec Explorations Inc. ("Matamec") is pleased to announce that it has completed the re-sampling of the last eight (8) historical trenches of the heavy rare earths-yttrium-zirconium Kipawa deposit, situated on the Zeus property. Of this re-sampling, 216 samples were sent to ALS-Chemex Laboratories of Val d'Or to be analyzed for 38 elements including the rare earths, yttrium and zirconium.

The re-sampling of the historical trenches of the Kipawa deposit is now complete, with the exception of 5 metres on trench T-8 and 20 metres on trench T-11 (see press release dated December 21, 2009), and of 2 metres on trench T-2 and of 7 metres on trench T-9. Only trench T-5 was never channel-sampled because it is located outside of the deposit. The location of the historical trenches and their respective re-sampling in 2008 and 2009 is shown on Figure 1 (http://media3.marketwire.com/docs/Trenches_re-sampling.pdf). The re-sampled trenches from 2009 are situated in the West Zone, Central Zone and East Zone as follows:

Kipawa Deposit	West Zone				Central Zone		East Zone	
Trench #	T-2	T-4	T-6	T-7	T-12	T-13	T-9	T-10
Number of samples	38	22	11	39	29	33	8	27
Sample #	H905523-560	H905501-522	H905584-594	H905564-583 H905686-704	H905595-623	H905652-684	H905705-712	H905625-651
Sample Width (metres)	73,5	42	22	76,95	58	64,15	14,2	54

This re-sampling is included within the framework of an independent NI 43-101 resource calculation for rare-earths, yttrium and zirconium of the Kipawa deposit whereby this mandate was attributed to the firm of SGS-Geostat by Matamec. The analytical results of this re-sampling, combined with those of June 2009, and of drill results from 1988 and 1990 as well as the upcoming analytical results from the fall 2009 drill holes will permit the update of the historical resource calculation for yttrium and zirconium conducted by Unocal Canada Ltd in 1991. The new resource calculation done by SGS-Geostat is expected for the first half of 2010.

Additional information will be communicated in the near future as the fall 2009 exploration program advances.

The geological data in this press release was prepared by Aline Leclerc, geologist and Matamec's Vice-President Exploration, a Qualified Person as defined by NI 43-101.

About Matamec

Matamec is exploring for rare earth elements on the Heavy Rare Earth's Kipawa deposit (Zeus property), located in the Kipawa Alkaline Complex in Temiscamingue, Quebec, and for significant gold deposits in the Timmins mining camp in Ontario, of which the two main targets are the Matheson JV property, with Goldcorp Canada Ltd and Goldcorp Inc, and the Montclerg property.

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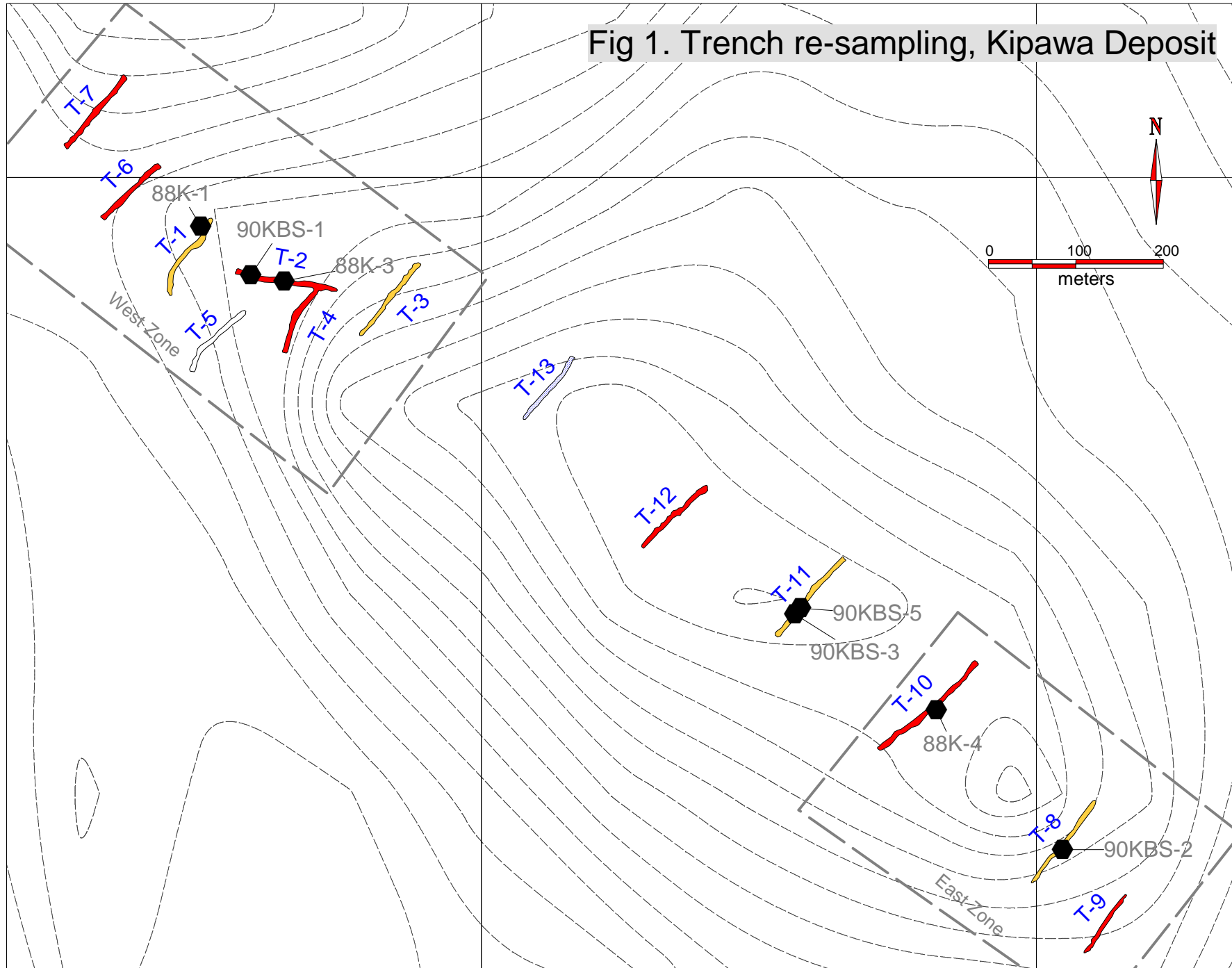
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Fig 1. Trench re-sampling, Kipawa Deposit



Yellow = Sampled Matamec 2008, Red = Sampled Matamec 2009 N.B. No historic channel sampling on T-5

Lat-Long NAD83. 1:6 000. Contour lines = 5m.