

PRESS RELEASE

TSX Venture: MAT

Twenty drill holes have been drilled on the heavy rare earths Kipawa deposit

Montreal, December 10, 2009 - Matamec Explorations Inc. ("Matamec") are pleased to announce that it has completed twenty short drill holes since the beginning of the exploration campaign on the yttrium-zirconium-heavy rare earths Kipawa deposit located on the Zeus property.

This deposit was partially drilled by Unocal Canada Ltd ("Unocal") in 1988 and 1990 by numbering the drill holes as 88KU-01 to 88KU-12 and 90KU-13 to 90KU-34. The numbering sequence for the current campaign thus begins with drill hole 09KM-35. All drill holes are perpendicular to the strike and dip of the local strata and the reported widths of our drill holes represent the true width of the syenitic complex and its associated mineralization.

The Kipawa deposit is primarily characterized by four types of mineralization, three with heavy rare-earth-yttrium and one of zirconium. Beginning with the upper-syenite through to the basal portion dominated by calc-alkaline rocks, we firstly encounter a zone dominated by eudialyte (a mineral that contains up to 10% rare earth oxides ("REO")), followed by a zone dominated by mosandrite and yttrio-titanite (up to 65% REO) and lastly by a calc-alkaline zone dominated by britholite (up to 62% REO). The fourth type of mineralization of zirconium, vlasovite, more or less altered and generally distributed in the syenitic gneiss, is present as independent horizons from the yttrium and rare earth mineralization. All ore-bearing mineralization generally occurs as decimetre bands disseminated along the entire width of the syenite and these bands then concentrate further into carrier-horizons.

Due to the fast pace of the drilling, the following table indicates the true thickness of the syenite and associated rocks, including amphibolites and calc-silicated rocks. The rare-earth, yttrium and zirconium ore-bearing minerals are present along the entire width of the host rocks and in all drill holes completed to date. However, this type of mineralization is difficult to visually estimate percentages, hence; we must wait for the analytical results to know the true grades.

Drill hole #	Length (m)	Dip	Syenite (m) From-to	Syenite width (m) (thickness along drill hole axis)
KM35	74.0	-60	2.54 - 60.27	57.73
KM36	71.5	-60	1.20 - 66.27	65.07
KM37	80.5	-60	0.15 - 59.96	59.81
KM38	98.5	-60	10.90 - 66.36	55.46
KM39	62.5	-60	5.78 - 57.21	51.43
KM40	56.5	-60	1.75 - 50.50	48.75
KM41	62.5	-60	16.20 - 56.90	40.70
KM42	65.5	-60	8.50 - 55.85	39.05
Twin7 (88KU-07)	56.5	-45	8.96 - 49.77	34.19
KM43	59.5	-60	3.30 - 52.52	48.22
KM44	62.5	-60	6.26 - 54.13	34.13
KM45	89.5	-60	23.15 - 85.26	37.51
KM46	53.5	-60	18.42 - 47.09	28.67
KM47	65.5	-60	Pending	
KM48	71.5	-60	23.00 - 65.00	41.94
KM49	80.5	-60	Pending	
KM50	71.5	-60	9.67 - 63.95	54.28
KM51	95.5	-60	37.31 - 91.30	65.96
KM52	86.5	-60	24.51 - 77.50	52.99
KM53	68.5	-60	25.97 - 63.06	37.09
Total to date	1 431.50			

The Zeus property covers most of the Kipawa Alkaline Complex (“KAC”): a concordant folded sheet of mildly peralkaline syenite and granite less than 200 metres thick. The KAC lies entirely within metamorphosed Precambrian gneiss of the Grenville Province, between a paragneissic and quartzo-feldspathic gneissic unit acting as the footwall. The KAC has been divided into two main units in the mineralized zone: a peralkaline granite gneiss unit and a syenite gneiss unit (with calc-silicate rocks interlayered within the syenite gneiss). The numerous REE-Y-Zr showings and zones, such as the Kipawa deposit, dotting the property are centered in and around these syenites.

The Kipawa deposit is defined over a strike length of 1,300 metres with a width ranging from 10 to 80 metres. It was partially drilled and it is the site of an historic yttrium and zirconium resource calculation on the West and East Zones by Unocal in 1990. The Central Zone of the deposit, 620 metres long, has no established resources because only three trenches and three drill holes have been done at very wide spacing even though every trench and drill hole in this part contain mineralization. Due to its favourable location at the top of an elongated hill, an open pit method for the mining of the mineralization was contemplated in 1990. The resource blocks having been calculated down to an average depth of 35 metres and limited to the eudialyte mineralization.

The current drilling campaign is to confirm the historical resources of the Kipawa deposit and to increase the said resources by drilling the Central Zone, that has been the focus of very limited work in the past and that has a strike length of 620 metres between the East and West Zones. For the purposes of an independent NI-43-101 resource calculation that will be conducted by SGS-Geostat, it is planned to complete twenty eight drill holes in all (Figure 1 – Drill plan), including 2 in the West Zone, 19 in the Central Zone and 7 in the East Zone.

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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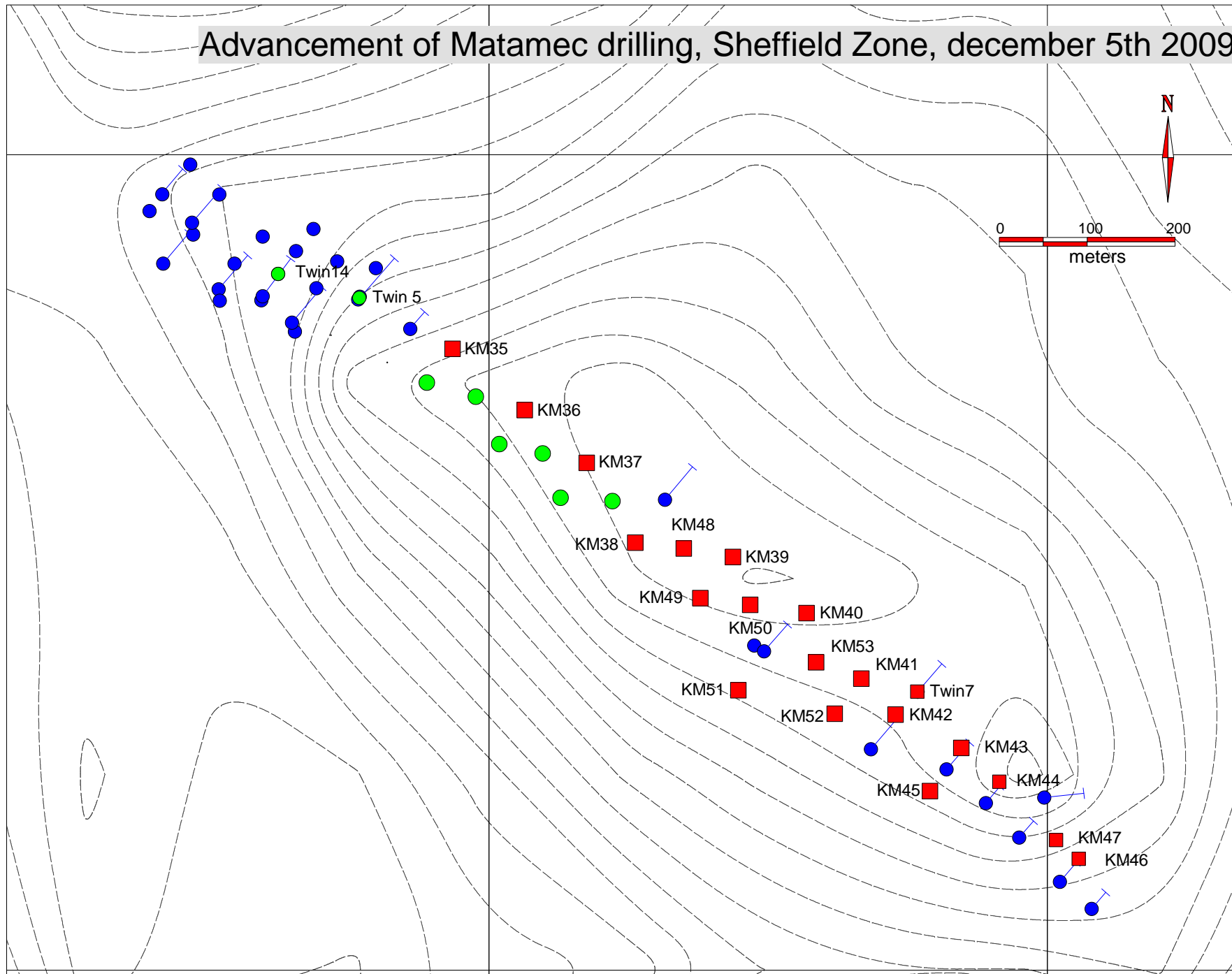
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Advancement of Matamec drilling, Sheffield Zone, december 5th 2009



Blue = Historical Unocal DDH, Red = Holes drilled to date, Green = Holes yet to be drilled

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