PRESS RELEASE

TSX Venture: MAT

Matamec Intersects .926% TREO Over 29.4 Metres with 34% HeavyREO+ Y_2O_3/TREO and 1.19% ZirconiumO_2 Over 64.9 metres in the New Central Zone on the Kipawa Deposit

Montreal, March 31, 2010 - Matamec Explorations Inc. ("**Matamec**") is pleased to announce that assay results have been received for the second group of the November-December 2009 diamond drilling program on the Central part of the rare earth-yttrium-zirconium (REE-Y-Zr) Kipawa deposit located within the Zeus property. The best preliminary results are .926% TREO (total rare earth oxides) over 29.4 metres in hole KM-61.

PRESS RELEASE HIGHLIGHTS

- The Kipawa deposit is in competition with the lateritic superficial clay deposits located in the Lognan/Jiangxi region of Southern China, where 95% of the global heavy rare earths and yttrium production comes from. These deposits are 3 to 10 meters thick with grades going from .05% to .20% TREO;
- The mineralization and the host syenite have been traced laterally for a length of 1.2 kilometres, on an average of 52 metres thick and are known to a depth of 80 metres;
- The Kipawa Deposit is presently considered open both laterally and at depth;
- The total of each of the ten drill holes of the second preliminary analysis group range from .366% to 1.60% TREO over thicknesses going from 2.8 meters to 29.4 meters. These drill hole intersections contain 27% to 48% HeavyREO + Y_2O_3 / TREO;
- The total of each of the eleven drill holes of the first preliminary analysis group range from .474% to 1.54% TREO over thicknesses going from 2.5 meters to 17.6 meters. These drill hole intersections contain 17% to 48% HeavyREO + Y_2O_3 / TREO;
- As well as REE-Y-Zr mineralization, the Kipawa deposit contains thick zones of ZrO_2 (zirconium oxides) mineralization. The total of each of the drilling holes go up to 1.10% ZrO_2 over 49.1 meters to 1.01 % ZrO_2 over 67.2 meters;
- Each of the 11 first drill hole ZrO_2 mineralized zones are accompanied with TREO values. The totals for each of the drill holes go from .243% to .453% TREO with thicknesses going from 49.1 to 67.2 meters. These drill hole intersections contain 27% to 36% HeavyREO + Y_2O_3 / TREO;
- A REE-Y-Zr mineralized zone is present in all analysed drill holes;
- In all but one of the drill sections in which two or more holes have been drilled, the hole that was drilled the furthest down dip (South-West) had the thickest and/or highest grade intersection;

- Upon receipt of all the 2009 assay results, a new NI 43-101 resource estimate will be completed by SGS-Geostat using the new data as well as the historic Unocal data;

- Mineralogical work is being supervised by Dr. A. Mariano and preliminary metallurgical tests are being done under the auspices of L. Heymann, P.Eng;

The total of each of the ten drill holes of the second preliminary analysis group range from .366% to 1.60% TREO over thicknesses going from 2.8 meters to 29.4 meters. These drill hole intersections contain 27% to 48% HeavyREO + Y_2O_3 / TREO. The second group assay results are set out in the table below (see Figure 1 for drill hole locations, identified by red lozenges):

Table 1
Interim REE-Y-Zr Zones Assay Results
Second Analysis Group - Incomplete Results
2009 Kipawa Drill Program

Drill Hole	**From** (m)	**To** (m)	**Width** (m)	**ZrO_2** (%)	**LREO*** (%)	**MREO**** (%)	**HREO***** (%)	**Y_2O_3**** (%)	**TREO** (%)	**% HREO +Y_2O_3 /TREO**
KM-39	18.7	24.2	5.5	*****	.413	.052	.089	.180	**.735**	37
KM-40	10.0	12.9	2.9	*****	.410	.047	.094	.204	**.756**	39
KM-41	40.2	43.0	2.8	*****	.766	.086	.150	.299	**1.30**	35
KM-48	26.5	30.2	3.7	*****	.388	.051	.094	.204	**.737**	46
KM-49	34.3	37.5	3.2	*****	.950	.092	.120	.256	**1.42**	27
KM-50	14.8	22.5	7.7	*****	.336	.045	.073	.143	**.597**	36
	31.0	35.8	4.8	*****	.572	.059	.074	.167	**.872**	28
	40.6	43.7	3.1	*****	.274	.039	.080	.151	**.544**	42
KM-51	53.2	58.8	5.6	*****	.349	.039	.091	.210	**.689**	44
KM-52	32.0	34.7	2.7	*****	.194	.029	.066	.131	**.420**	47
	42.9	48.1	5.2	*****	.181	.021	.060	.105	**.366**	45
	70.3	73.8	3.5	*****	.722	.115	.215	.548	**1.60**	48
KM-53	30.5	41.2	10.7	*****	.384	.041	.066	.136	**.627**	32
KM-61	24.1	53.5	29.4	*****	.554	.059	.101	.212	**.926**	34
	60.4	64.5	4.1	*****	.250	.031	.065	.120	**.467**	40

*Light rare earths (LREO) = La_2O_3 to Nd_2O_3.
**Medium rare earths (MREO) =Sm_2O_3 to Gd_2O_3
***Heavy rare earths (HREO) = Tb_2O_3 to Lu_2O_3.
**** Y_2O_3 is part of TREO.
***** ZrO2 values await receipt of further over-limit reanalyses.

Note: Judith Chegwidden of Roskill Information Services Ltd. and Dudley Kingsnorth of Industrial Minerals Company of Australia Pty Ltd. on their last presentation entitled "Rare earths – balancing supply & demand" at the 20th Industrial Minerals International Congress & Exhibition on March 21-24, 2010, in Miami divided the 15 REEs in three types:
Light (or Ceric) rare earths (LREO) = La_2O_3 to Nd_2O_3.
Medium rare earths (MREO) =Sm_2O_3 to Gd_2O_3.
Heavy (or Yttric) rare earths (HREO) = Tb_2O_3 to Lu_2O_3.

Note : The fifteen elements which compose TREO of each drill hole will be published when the assay results for all 33 drill holes will be received.

Note: these TR-Y-Zr zones are defined by a 0.1% + Y_2O_3 cut-off over a minimum of 2.5 meters to conform with the historic Unocal data.

This brings to 21 the number of drill holes out of 31 of this program for which Matamec has received interim results. Every drill hole for which the results are known has intersected with a mineralized zone. Many of these zones contain multiple layers of REE-Y-Zr.

Moreover, the complete results are now available for the first group of drill holes (11 drill holes, see press release on March 5, 2010), most particularly for the over-limits of ZrO_2. The complete results are detailed in Table 2 (see Table 1 for the location of the assays that are circled in red):

Table 2
Interim REE-Y-Zr Zones Assay Results
First Analysis Group - Complete Results
2009 Kipawa Drill Program

Drill Hole	**From** (m)	**To** (m)	**Width** (m)	**ZrO_2** (%)	**LREO*** (%)	**MREO**** (%)	**HREO***** (%)	**Y_2O_3**** (%)	**TREO** (%)	**% HREO +Y_2O_3 /TREO**
KM-35	7.8	10.4	2.6	**2.22**	.356	.037	.121	.242	**.753**	48
	14.3	19.5	5.2	**0.99**	.347	.048	.078	.165	**.636**	38
	35.2	46.8	11.6	**0.57**	.356	.036	.060	.134	**.583**	33
KM-36	23.9	27.1	3.2	**0.55**	.458	.060	.090	.196	**.804**	36
	35.8	41.1	5.3	**1.17**	.433	.048	.084	.180	**.743**	36
	46.7	50.5	3.8	**0.30**	.369	.035	.072	.170	**.644**	38
KM-37	11.6	17.5	5.9	**1.16**	.675	.064	.096	.214	**1.05**	30
	28.6	33.8	5.2	**1.67**	.333	.035	.068	.143	**.575**	37
KM-38	21.8	34.8	13.0	**0.64**	.355	.038	.061	.124	**.578**	32
KM-54	19.2	24.0	4.8	**0.80**	.325	.045	.080	.182	**.630**	42
	26.7	41.8	15.1	**0.80**	.357	.042	.070	.160	**.625**	37
KM-55	19.5	25.0	5.5	**0.56**	.838	.076	.108	.218	**1.41**	23
	45.9	49.7	3.8	**0.42**	.679	.069	.107	.229	**1.08**	31
KM-56	24.9	42.5	17.6	**0.78**	.607	.060	.093	.216	**.976**	32
KM-57	14.3	24.4	10.1	**0.89**	.464	.048	.077	.163	**.751**	32
	39.4	42.5	3.1	**1.36**	.314	.046	.094	.198	**.649**	45
KM-58	18.1	22.6	4.5	**0.96**	.399	.043	.063	.143	**.645**	32
	27.1	31.5	4.4	**0.37**	.981	.094	.117	.276	**1.54**	25
	38.0	40.5	2.5	**1.74**	.920	.095	.146	.350	**1.51**	33
	48.1	55.7	7.6	**1.54**	.503	.044	.071	.187	**1.35**	21
KM-59	27.8	33.8	6.0	**1.08**	.271	.031	.056	.118	**.474**	37
KM-60	22.6	31.6	9.0	**1.12**	.347	.044	.084	.190	**.660**	41
	37.8	48.1	10.3	**0.81**	.686	.065	.092	.202	**1.05**	28

*Light rare earths (LREO) = La_2O_3 to Nd_2O_3.
**Medium rare earths (MREO) =Sm_2O_3 to Gd_2O_3.
***Heavy rare earths (HREO) = Tb_2O_3 to Lu_2O_3.
**** Y_2O_3 is part of TREO.

Note: Judith Chegwidden of Roskill Information Services Ltd. and Dudley Kingsnorth of Industrial Minerals Company of Australia Pty Ltd. on their last presentation entitled "Rare earths – balancing supply & demand" at the 20th Industrial Minerals International Congress & Exhibition on March 21-24, 2010, in Miami divided the 15 REEs in three types:
Light (or Ceric) rare earths (LREO) = La_2O_3 to Nd_2O_3.
Medium rare earths (MREO) =Sm_2O_3 to Gd_2O_3.
Heavy (or Yttric) rare earths (HREO) = Tb_2O_3 to Lu_2O_3.

Note : The fifteen elements which compose TREO of each drill hole will be published when the assay results for all 33 drill holes will be received.

Note: these TR-Y-Zr zones are defined by a 0.1% + Y_2O_3 cut-off over a minimum of 2.5 meters to conform with the historic Unocal (1988-1990) data.

The total of each of the eleven drill holes of the first preliminary analysis group range from .474% to 1.54% TREO over thicknesses going from 2.5 meters to 17.6 meters. These drill hole intersections contain 17% to 48% HeavyREO + Y_2O_3 / TREO.

These results show that a zone of REE plus Zr mineralization is present in every hole so far analysed, confirming (1) the postulated continuity between the previously defined (by Unocal Canada Ltd, 1990) West and East Zones; (2) in all but one of the drill sections in which two or more holes have been drilled (see Figure 1), the hole that was drilled the furthest down dip (South-West) had the thickest and/or highest grade intersection. The best of the intersections in Table 1 above, that in KM 61, is located at the east end of the West Zone and is completely open at depth. These two facts strongly suggest that the mineralization is improving in the down dip direction within the recently drilled area, which significantly increases the tonnage potential of the project.

As well as REE-Y-Zr mineralization, the Kipawa deposit contains thick zones of ZrO_2 (Zirconium oxides) mineralization. The total of each of the drill holes go up to 1.10% ZrO_2 over 49.1 meters to 1.01 % ZrO_2 over 67.2 meters. The majority of the Zr in these adjacent zones is contained in the mineral vlasovite, a potentially non-refractory Na-Zr silicate. Mineralogical work is being supervised by Dr. A. Mariano and preliminary metallurgical tests are being done under the auspices of L. Heymann, P.Eng. These two world renowned experts are members of the Strategic Committee for Rare Earths advising Matamec's Board of Directors.

Each of the ZrO_2 mineralized zones of the first 11 drill holes are accompanied with TREO values. The totals for each of the drill holes go from .243% to .453% TREO with thicknesses going from 49.1 to 67.2 meters. These intersections contain 27% to 36% HeavyREO + Y_2O_3 / TREO. Matamec considers itself a potential global supply for REE-Y-Zr. It is in competition with the lateritic surficial clay deposits located in the Lognan/Jiangxi region of Southern China, where more than 95% of the global heavy rare earths and yttrium production comes from. These deposits are 3 to 10 meters thick with grades going from .05% to .20% TREO.

These Zr mineralization zones, which are accompanied by TREO, are present in every hole, so far analysed, as set out in the table 3 below (they are defined by an arbitrary 0.5% ZrO_2 cut-off over a minimum width of 5 m, other than the total for each drill hole). Only those drill holes for which complete over limit analyses have been received are listed below:

Table 3
ZrO_2 Zone
First Assay Results - Complete Results
2009 Kipawa Drill Program

Drill Hole	From (m)	To (m)	Width (m)	TREO (%)	% HREO +Y_2O_3 / TREO	ZrO_2 (%)
KM-35	3.9	33.1	29.2	.280	39	**1.30**

	43.8	60.3	16.5	.243	35	**1.06**
Total :	***3.9***	***60.3***	***56.4***	***.312***	***36***	***1.07***
KM-36	17.2	46.7	29.5	.395	35	**1.08**
	50.5	66.3	15.8	.173	38	**1.33**
Total :	***17.2***	***66.3***	***49.1***	***.343***	***36***	***1.10***
KM-37	5.3	36.3	31	.403	32	**1.29**
	42.5	61.15	18.7	.279	39	**1.04**
Total :	***5.3***	***61.15***	***55.85***	***.363***	***33***	***1.09***
KM-38	13.4	24.2	10.8	.236	30	**.83**
	27.7	42.1	14.4	.403	34	**1.01**
	44.8	65.7	20.9	.111	41	**1.42**
Total:	***13.4***	***65.7***	***52.3***	***.243***	***33***	***1.05***
KM-54	11.5	23.5	12	.295	38	**.71**
	33.2	56.2	23	.425	32	**.98**
	59	73	14	.120	28	**1.15**
Total :	***11.5***	***73***	***61.5***	***.326***	***34***	***.85***
KM-55	**10.8**	**19.9**	**9.1**	**.252**	**33**	**1.30**
	26	**45.4**	**18.6**	**.418**	**26**	**1.19**
	48	**65.1**	**17.1**	**.278**	**35**	**1.01**
Total :	***10.8***	***65.1***	***54.3***	***.453***	***28***	***1.01***
KM-56	20.5	29.3	8.8	.362	33	**1.15**
	33.3	73.5	40.2	.417	33	**1.07**
Total :	***20.5***	***73.5***	***53***	***.425***	***33***	***1.02***
KM-57	12.2	18.2	6	.677	33	**1.20**
	28.5	50.9	22.4	.332	34	**1.24**
	53.8	68.1	14.3	.223	35	**1.22**
Total :	***12.2***	***68.1***	***55.9***	***.364***	***33***	***1.03***
KM-58	6	21.8	15.8	.225	30	**.94**
	31.5	50.9	19.4	.627	23	**1.69**
	54	70.9	16.9	.245	38	**1.48**
Total :	***6***	***70.9***	***64.9***	***.444***	***27***	***1.19***
KM-59	5.9	59.5	53.6	0.495	28	**1.04**
KM-60	15.5	32.5	17	.414	40	**.94**
	35.5	49.1	13.6	.848	28	**.89**
	55.2	66.2	11	.058	48	**1.70**
	68.6	82.7	14.1	.146	38	**1.31**
Total :	***15.5***	***82.7***	***67.2***	***.361***	***33***	***1.01***
Note: that the ZrO_2 zones in the table above sometimes overlap with or include some of the REE-Zr zones in Table 2.						

All mineralized zones intersected to date, both REE-Zr and Zr, are interpreted to dip at about 20^{o} to the southwest, parallel to the layering in the host peralkalic syenite gneiss. The mineralization and the host syenite have been traced laterally for a length of 1.2 kilometres. The syenite body which hosts the mineralized zones is an average of 52 metres thick and is known to a depth of 80 metres. The Kipawa Deposit is presently considered open both laterally and at depth.

Upon receipt of all the 2009 assay results, a new NI 43-101 resource estimate will be completed using the new data as well as the historic Unocal data. In terms of historic

resources, the Kipawa Deposit is composed of the *West Main Zone* (1.26 Mt @ 0.15% Y_2O_3 and 0.96% ZrO_2) and the *East Main Zone* (1.09 Mt @ 0.14% Y_2O_3 and 1.17% ZrO_2). *Please note that a qualified person has not done sufficient work to classify the historical estimates as current mineral resources, Matamec is not treating the historical estimates as current mineral resources and the historical estimates should not be relied upon*.

Matamec maintains a quality control program conforming to industry best practices in the sampling and analysis of drill core. The NQ core is split, with one half kept for reference at our Val d'Or facilities. Samples were then submitted in batches containing known standards and blanks to the ALS Chemex ("ALS") preparation facility in Val d'Or where the samples are reduced to pulps and couriered to ALS in Vancouver (B.C.) for analysis. The samples were analysed by ICP-MS methods on a 2 gram sample size. The samples and core are stored in a secure location until delivered to ALS.

Alex Knox (P.Geol) and Aline Leclerc, geologist (OGQ) and Matamec's Vice-President Exploration, are Matamec's Qualified Persons for the Zeus project. As QP, they supervised the preparation of the scientific and technical information for the Zeus property and verified the data disclosed in this press release. Alex is member of the Strategic Committee for Rare Earths advising Matamec's Board of Directors.

About Matamec

Matamec explores for significant gold deposits in the Timmins mining camp in Ontario of which the Matheson (with Goldcorp) and Montclerg properties are the two main targets. In Quebec, the Company explores for precious and base metals on its Sakami, Valmont and Vulcain Properties. As well, Matamec is exploring for gold along with Northern Superior Resources Inc. on its Lespérance/Wachigabau Property.

Along with the above mentioned exploration programs, Matamec's Quebec Tansim Property is also being explored for rare metals such as tantalum and lithium.

"Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release."

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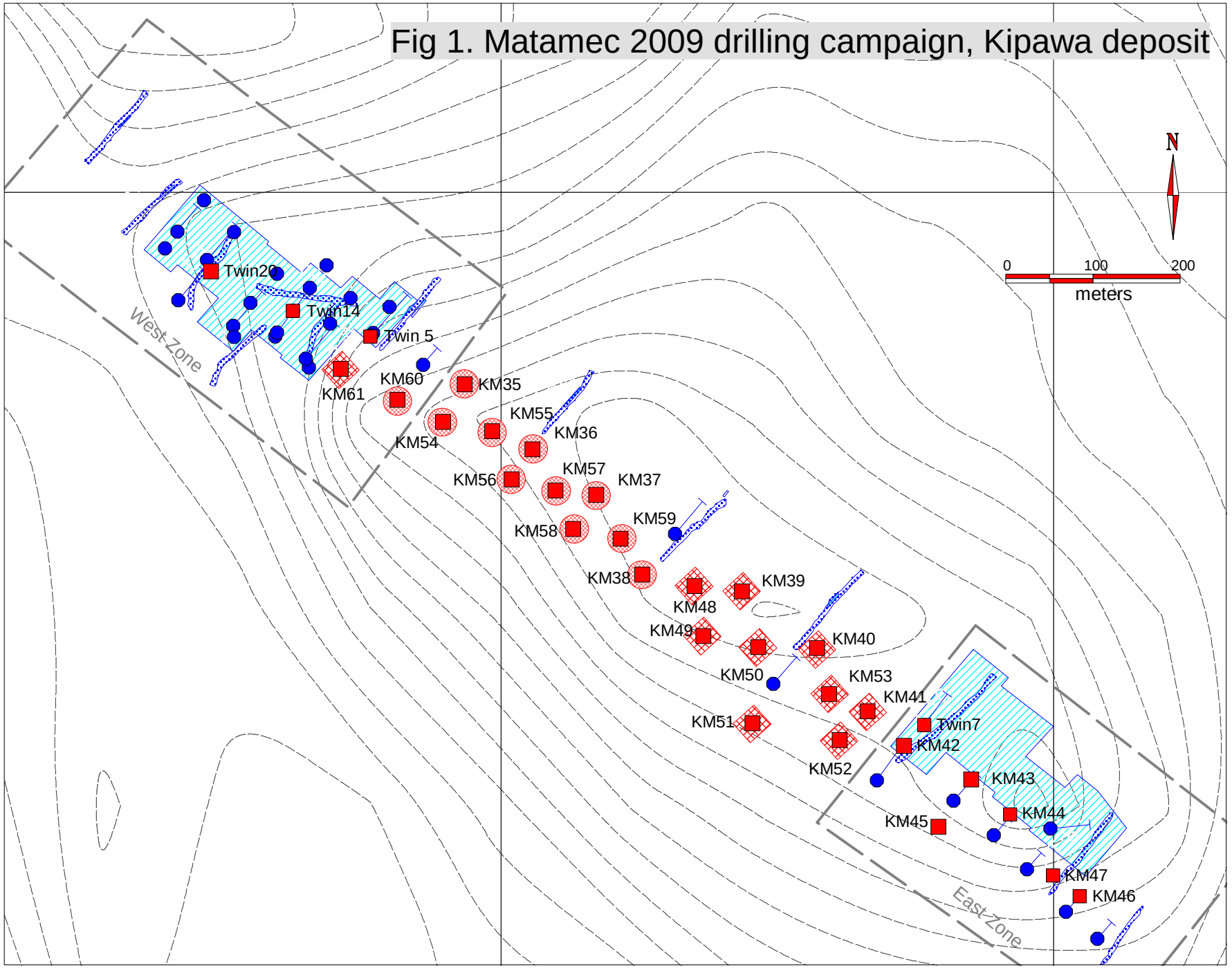
Fig 1. Matamec 2009 drilling campaign, Kipawa deposit



Blue = Unocal DDH and trenches,
Blue = Historical ressource blocs

Red= Matamec 2009 DDH, Circled = Last press release, Diamonds = This press release

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