

Supporting Information for

**A General Synthesis of Phosphaalkenes at Zirconium with  
Liberation of Phosphaformamides**

**Andrew J. Roering,<sup>a,b</sup> L. Taylor Elrod,<sup>a,c</sup> Justin K. Pagano,<sup>a</sup> Sarah L. Guillot,<sup>a</sup> Stephanie M. Chan,  
<sup>a</sup> Joseph M. Tanski,<sup>d</sup> and Rory Waterman,<sup>\*,a</sup>**

<sup>a</sup> Department of Chemistry, University of Vermont, Address, Cook Physical Sciences Building, Burlington, VT 05405, USA. Fax: 01 802 656-8705; Tel: 01 802 656-0278; E-mail: rory.waterman@uvm.edu. <sup>b</sup> current address: Department of Chemistry and Biochemistry, University of San Diego, San Diego, CA 92110, USA. <sup>c</sup> current address: Department of Chemistry, Brown University, Providence, RI 02906, USA. <sup>d</sup> Department of Chemistry, Vassar College, Poughkeepsie, NY, 12604, USA.

**Variable temperature data for 7.**

**Figure S-1.** Variable-temperature <sup>1</sup>H NMR study of **7**, with selected temperatures displayed.

Temperature: a = 318 K, b = 298 K, c = 278 K, d = 258 K, e = 238 K, f = 228 K, g = 218 K, h = 208 K. At temperatures below 208 K the peaks appear distorted possibly due to solubility issues. The two peaks coalesce at 318 K to a single doublet.

