Supporting Information

Reactivity Studies of the Silylene [PhC(NtBu)₂](C₅Me₅)Si - Reactions with [M(COD)Cl]₂ (M = Rh(I), Ir(I)), S, Se, Te, and BH₃

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Figure S1: $^1H$ NMR spectrum of 1 in C$_6$D$_6$.

Figure S2: $^1H$/$^11B$ NMR spectrum of 1 in C$_6$D$_6$. 
Figure S3: $^{13}$C($^1$H) NMR spectrum of 1 in C$_6$D$_6$.

Figure S4: $^{11}$B NMR spectrum of 1 in C$_6$D$_6$. 
Figure S5: $^{11}B\{^{1}H\}$ NMR spectrum of 1 in C$_6$D$_6$.

Figure S6: $^{29}$Si NMR spectrum of 1 in C$_6$D$_6$. 
Figure S7: $^1$H NMR spectrum of 2 in C$_6$D$_6$.

Figure S8: $^{13}$C($^1$H) NMR spectrum of 2 in C$_6$D$_6$. 
Figure S9: $^{29}\text{Si}$ NMR spectrum of 2 in C$_6$D$_6$.

Figure S10: $^1\text{H}$ NMR spectrum of 3 in THF-d$_8$. 
Figure S11: $^{13}$C{H} NMR spectrum of 3 in THF-d$_8$.

Figure S12: $^{29}$Si NMR spectrum of 3 in THF-d$_8$. 
Figure S13: Low temperature VT 1H NMR spectra of compound 3 in THF-d8.

Figure S14: $^1$H NMR spectrum of 4 in THF-d8.
Figure S15: $^{13}$C\text{${}^1$H} NMR spectrum of 4 in THF-d$_8$.

Figure S16: Low temperature VT $^1$H NMR spectra of compound 4 in THF-d$_8$.
Figure S17: $^1$H NMR spectrum of 5 in THF-d$_8$.

Figure S18: $^{13}$C{$_^1$H} NMR spectrum of 5 in THF-d$_8$. 
Figure S19: $^{29}$Si NMR spectrum of 5 in THF-d8.

Figure S20: $^1$H NMR spectrum of 6 in THF-d8.
Figure S21: $^{13}C\{^1H\}$ NMR spectrum of 6 in THF-$d_8$.

Figure S22: $^2D\,^1H\,^{29}Si$ NMR Spectrum of 6 in THF-$d_8$. 
Plots showing thermal ellipsoids of all structures

Figure S23: Molecular structure of 1 in the solid-state. Hydrogen atoms (except BH3) are omitted for clarity. Ellipsoids displayed at 50% probability.
Figure S24: Molecular structure of 2 in the solid-state. Hydrogen atoms are omitted for clarity. Ellipsoids displayed at 50% probability.
Figure S25: Molecular structure of 3 in the solid-state. Hydrogen atoms are omitted for clarity. Ellipsoids displayed at 50% probability.
Figure S26: Molecular structure of 4 in the solid-state. Hydrogen atoms are omitted for clarity. Ellipsoids displayed at 50% probability.
Figure S27: Molecular structure of 5 in the solid-state. Hydrogen atoms are omitted for clarity. Ellipsoids displayed at 50% probability.
Figure S28: Molecular structure of 6 in the solid-state. Hydrogen atoms are omitted for clarity. Ellipsoids displayed at 50% probability.