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17. 100.0 g $\left(\frac{mol}{12.01+4(1.0079)g}\right) = 6.2334\ mol$

$$\Delta H = 6.2334\ mol\left(\frac{-802.0\ kJ}{mol}\right) = -4999\ kJ$$

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15.

Bond	Energy
D-D	400 kJ/mol
E-E	500 kJ/mol

$D_2 + E_2 \rightarrow 2\ DE$ + heat

To break the two bonds requires (1mole* (400 kJ/mole)+ 1mole* (500 kJ/mol)= 900 kJ

But if the reaction is exothermic, then 2 DE releases *more than* 900 KJ. So DE's bond > 900kJ/2 moles = 450 kJ/mol.

Answer (f)

Note that when calculating ΔH, we would use -450 kJ, but when expressed as a bond energy it is listed as a positive value.