$\hat{O}_1$

caso 1: $|k\rangle = |\ldots m m \ldots\rangle$ $\{\ldots m, m \ldots\} \equiv \{occ$

$$\langle k|\hat{O}_1|k\rangle = \sum_i^{occ} \langle i|h|i\rangle$$

caso 2 $|k\rangle = |\ldots m m \ldots\rangle$

$|L\rangle = |\ldots p m \ldots\rangle$

$$\langle k|\hat{O}_1|L\rangle = \langle m|h|p\rangle$$

caso 3 $|k\rangle = |\ldots m m \ldots\rangle$

$|L\rangle = |\ldots p q \ldots\rangle$

$$\langle k|\hat{O}_1|L\rangle = 0$$

$\hat{O}_2$

Caso 1: $|k\rangle = |\ldots mm\ldots\rangle$

$$\langle k|\hat{O}_2|k\rangle = \frac{1}{2}\sum_{i}^{occ}\sum_{j}^{occ}\langle ij||ij\rangle$$

Ejemplo: base $\{a, b, c, d\}$

$|k\rangle = |abc\rangle \Rightarrow occ \equiv \{a, b, c\}$

Caso 2 $|k\rangle = |\ldots mm\ldots\rangle$

$|L\rangle = |\ldots pm\ldots\rangle$

$$\langle k|\hat{O}_2|L\rangle = \sum_{i}^{occ}\langle mi||pi\rangle$$

Caso 3 $|k\rangle = |\ldots mm\ldots\rangle$

$|L\rangle = |\ldots pq\ldots\rangle$

$$\langle k|\hat{O}_2|L\rangle = \langle mm||pq\rangle$$