$$= \frac{1}{\|f\|^{2n}} \|f\|^2 \bigwedge_{j\neq i} f_j\, d\bar{f}_j$$

$$- \sum_{k\neq i} \frac{|f_k|^2}{\|f\|^{2n}} \bigwedge_{j\neq i} f_j\, d\bar{f}_j - \sum_{k<i} (-1)^{i+k+1} \frac{|f_k|^2}{\|f\|^{2n}} \bigwedge_{j\neq k} f_j\, d\bar{f}_j$$

$$- \sum_{k>i} \frac{|f_k|^2}{\|f\|^{2n}} (-1)^{i+k+1} \bigwedge_{j\neq k} f_j\, d\bar{f}_j$$

$$= \frac{1}{\|f\|^{2n}} \|f\|^2 \bigwedge_{j\neq i} f_j\, d\bar{f}_j - \sum_{k\neq i} \frac{|f_k|^2}{\|f\|^{2n}} \bigwedge_{j\neq i} f_j\, d\bar{f}_j - \sum_{k\neq i} (-1)^{i+k+1} \frac{|f_k|^2}{\|f\|^{2n}} \bigwedge_{j\neq k} f_j\, d\bar{f}_j$$

$$= \frac{1}{\|f\|^{2n}} \Big(\|f\|^2 - \sum_{k\neq i} |f_k|^2 \Big) \bigwedge_{j\neq i} f_j\, d\bar{f}_j - \sum_{k\neq i} \frac{(-1)^{i+k+1} |f_k|^2}{\|f\|^{2n}} \bigwedge_{j\neq k} f_j\, d\bar{f}_j$$

$$= \frac{1}{\|f\|^{2n}} \Big(|f_i|^2 \bigwedge_{j\neq i} f_j\, d\bar{f}_j - \sum_{k\neq i} (-1)^{i+k+1} |f_k|^2 \bigwedge_{j\neq k} f_j\, d\bar{f}_j \Big)$$

$$\Rightarrow \quad |f_i|^2 \bigwedge_{j\neq i} f_j\, d\bar{f}_j = \bar{f}_i\, f_1 \cdots f_n\, d\bar{f}_1 \wedge \cdots \wedge \widehat{d\bar{f}_i} \wedge \cdots d\bar{f}_n$$

$$= (-1)^i (-1)^i f_1 \cdots f_n\, \bar{f}_i \bigwedge_{j\neq i} d\bar{f}_j$$

and

$$\sum_{k\neq i} |f_k|^2 (-1)^{i+k} \bigwedge_{j\neq k} f_j\, d\bar{f}_j$$

$$= \sum_{k\neq i} (-1)^i (-1)^k\, \bar{f}_k\, f_1 \cdots f_n \bigwedge_{j\neq k} d\bar{f}_j .$$

$$\Rightarrow \quad |f_i|^2 \bigwedge_{j\neq i} f_j\, d\bar{f}_j + \sum_{k\neq i} |f_k|^2 (-1)^{i+k} \bigwedge_{j\neq k} f_j\, d\bar{f}_j$$

$$= (-1)^i \sum_k (-1)^k \bar{f}_k\, f_1 \cdots f_n \bigwedge_{j\neq k} d\bar{f}_j$$

$$\Rightarrow \quad \bigwedge_{j\neq i} \bar{\partial} \rho_j = \frac{1}{\|f\|^{2n}} (-1)^i f_1 \cdots f_n \Big(\sum_k (-1)^k \bar{f}_k \bigwedge_{j\neq k} d\bar{f}_j \Big)$$