A study of 1/R expansions in oblate spheroidal coordinates PhL 6.27.10

I have not written this little doc yet, but I want to have a stub to hold the result which I derived in the document "the Smythe method for Green's Functions, cone examples.doc" Appendix D, and which is verified by Smythe:

$$1/R = j \sum_{n=0}^{\infty} \sum_{m=0}^{n} (-1)^m (\varepsilon_m / c_1) (2n+1) f(n,-m)^2 Q_n^m(j\zeta_>) P_n^m(j\zeta_<) P_n^m(\xi) P_n^m(\xi_0) \cos(m[\varphi-\varphi_0])$$

In Appendix E of that same doc I show that $Q_n^m(j\zeta_>) P_n^m(j\zeta_<)$ is pure imaginary, so that each term in the above double sum is in fact real.