The recent eruptive processes at Colima Volcano in western Mexico displayed several cycles of
dome growth and destruction. Here we present the results of our analyses of the explosions
occurring in 2003 and 2005 which destroyed the domes extruded in 2001–2002 and 2004,
respectively. These explosions were recorded by RESJAL (Red Sísinctica Telemétrica de Jalisco,
operated by Protección Civil Jalisco) and SisVOc (Universidad de Guadalajara). Each station is
equipped with a 3-component short period seismometer (Le3D, 1Hz) and 24 bit Everest-
Kinematics digitize. We used data mainly from station F03J located 12 km at north of the
volcano because it was the only one that recorded all the explosions. From the model for
vulcanian explosions proposed by Núñez-Cornú et al. (2010), we took the first 8 seconds of the
seismic signal, which includes the source mechanism that injects or releases the magmatic
parcel. We use different approaches to identify the sources (digital analysis, polarities of first
arrivals, particle motions, S-P times, et c.). A preliminary classification of these sources is
proposed. Using the characteristics of the sources we propose a model of fault mesh
seismogenics for the movement of the magmatic parcels based on the models proposed by
David Hill (1977).