Chapter 5

Conclusion

- Post-rift stage NE-SW to ENE-WSW trending faults and some reactivation faults of the NNE-SSW trend maybe acted as conduits for magma within the sedimentary basin.
- Volcanoes are mostly confined at south except two complexes at north and one in the middle. Volcanic activity migrated towards south gradually supported by the fact that intrusion 1 at north is in deeper depth (2.5s) shows cross cutting sedimentary packages deposited approximately during Late Miocene package, while intrusions at south are in shallower section (1 s) and are onlapped by Late Miocene to Early Pliocene package.
- Volcanic activity was mild at the north and did not last until the shallow section that is why at north volcanoes have less volume and less basal diameters, whereas the southern extrusive bodies are relatively larger in size in terms of above parameters, attributed to intense volcanic activity.
- Post rift sediment depositional pattern was locally affected by the zone of igneous intrusions, resulting dipping strata onlapping on top of intrusive bodies. At places local antiformal structures developed on top of the volcanic domes. However, there was no such effect of the magmatic event on sedimentation pattern in regional scale.
- Based on RMS amplitude maps it can be concluded that at places the edifices produced local radial channels pattern developed during Early to Middle Miocene.
- The dip of the strata is steep near the edifices and become gentle away from the intrusions showing the interaction of the sediments with the intrusions. Upwards tilting of reflections from sedimentary strata can be related both to differential compaction over remnant volcanoes and by igneous intrusion.

- Interbedded lavas, pyroclastics and sediments associated with volcanoes form distinctive seismic packages characterized by relatively high amplitudes, and a wedge-shaped geometry, that interfinger with basin sediments, which onlap the top of the wedge. These deposits stand out on RMS amplitude maps, and form a narrow zone (radius >10 km) around volcanic edifices.