



Figure 8: 3D forward and inverse modeling profiles

4. CONCLUSION

Aerogravity data has been used to delineate faults and cavities using gravity techniques in order to aid in better roads construction. Gravity techniques depict clearer information with regards to the presence of subsurface faults and cavities and identify possible gravity sources. However, the presence of negative anomalies indicates natural cavities that pose menace to ground bearing capacity in engineering constructions, due to decreased density contrast caused by rock fracture with possible calculation of depths of anomalies. From the results, bouguer gravity anomaly values, both shallow and deep depths were delineated in which the negative values indicate low compactness of gravity. Also, low depth portrays loose sediments formation whereas high depth portray dense sediment formation indicating hydrocarbon mass. Three profile were made showing cylindrical and ellipsoidal model patterns with syncline and anticline structure trends. These density/mass assess depicts the presents of strike-slip and normal faults with natural cavities of air, water and sediments-filled formations, indicating accumulations of shale, petroleum and kaolinite as possible cause of gravity anomalies within the study area.

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