

DATA QUALITY AND RELIABILITY OF RESULTS

The quality of the field data was considered to be below average for this type of survey. The analog recordings were at vertical scale of 10 gamma/inch and horizontal scale of from .2 mile/inch to near .4 mile/inch. The vertical scale is ideal for the area, however, .5 to .7 mile/inch would be more workable horizontal scale, but this is not a major consideration. The recording trace at best had a 3 gamma noise envelope and frequently ran to 10 to 15 gamma of noise and in some cases became entirely unusable. A grading of the field data would have 23 lines graded fair, 13 poor, 5 very poor and 7 not usable. Considering the quality of the field data, the diurnal activity and the intersection mis-ties, the corrected observed map is probably not accurate to less than 10 gamma.

OBSERVED MAPS, PLATE 1, SHEETS I AND II

The observed field is contoured with an interval of ten gamma and apparently results from induced magnetization by the Earth's normal field. The field over area PEP 62(A) is intrabasement in nature and is apparently the negative component of intrabasement positives that exist beyond the limits of control. The gradient certainly suggests that the magnetic basement in the area is quite deep.

The observed field over area PEP 63(B) exhibits sharper anomalies that suggest the magnetic basement occurs at depths less than the area to the north. Poor data over this area makes it impossible to confirm this assumption. The sharp observed anomalies along the western edge of the area T/1P certainly suggests a shallow basement exists along that edge at least to latitude  $30^{\circ}45'$  south. The two outstanding observed features in this area are the large positive at latitude  $39^{\circ}35'$ , longitude  $148^{\circ}50'$ , and the northeast-southwest trending negative through the southern portion of the area.

COMPUTED MAGNETIC FIELD, PLATE 3, SHEETS I AND II

One of the objectives of the marine magnetic survey was to compare the marine data with the airborne data of 1967. To accomplish this the field that resulted from the marine data at sea level was computed upward to