Introduction

I. Introduction.

The field-work on which this paper is based was undertaken for the Shell Group of oil-companies, between April and August, 1925. The directorate of the Bataafsche Petroleum Maatschappij at the Hague has generously invited me to publish the results not directly related to commercial production.

As a geologist of the Shell Group, J. M. MUIR had the writer's reports at his disposal and has used certain data in his excellent book on the geology of the Tampico district (MUIR, 1936). So far, only two brief notes have been published by myself on the Tampico region (ARN. HEIM, 1926, 1934).

In addition, two valuable papers by W. STAUB have been published in 1937 and 1939 on the Tampico region. The former one contains a series of complete sections in 1: 200 000 including Sierra Tamaulipas and Sierra Madre Oriental, the latter after my observations.

The region involved measures 300 kms from north to south and is 30—50 kms wide. The adjoining map is a reduction of twelve 1: 100 000 sheets. The work was hampered by bad weather, poor roads, slow transportation and untrustworthy base-maps. The northern and southern extremities of the area could not be studied as thoroughly as intended. The topography of the 1: 100 000 map of Mexico proved very unreliable. Much time was lost in the field over orientation and topographic correction.

North of Xicotencatl, the basalt-mesas were plane-tabled. The distance from this town to the mountain-front proved to be about 6 kms too short on the 1: 100 000 map. Hence, in such regions where the topographic contours are entirely false, we compromised by drawing the geological boundaries without regard to topography. In the reduced scale of the map, it was impossible to enter the strikes and dips, of which several thousands are indicated on the original sheets.

So long as the dry weather lasted, part of the work along the plain was done with the help of two Ford cars. But on the first days of heavy rain they stuck in the mud; even travelling on horseback became difficult. The hilly region

was traversed partly on horses or mules, partly on foot, tents being used for camping.

The Front Ranges, especially in the north, are exceedingly difficult of access on account of dense jungle with cactus and thorny underbrush, as well as by lack of trails. No jungle known to the writer presents so many obstacles to geological work.

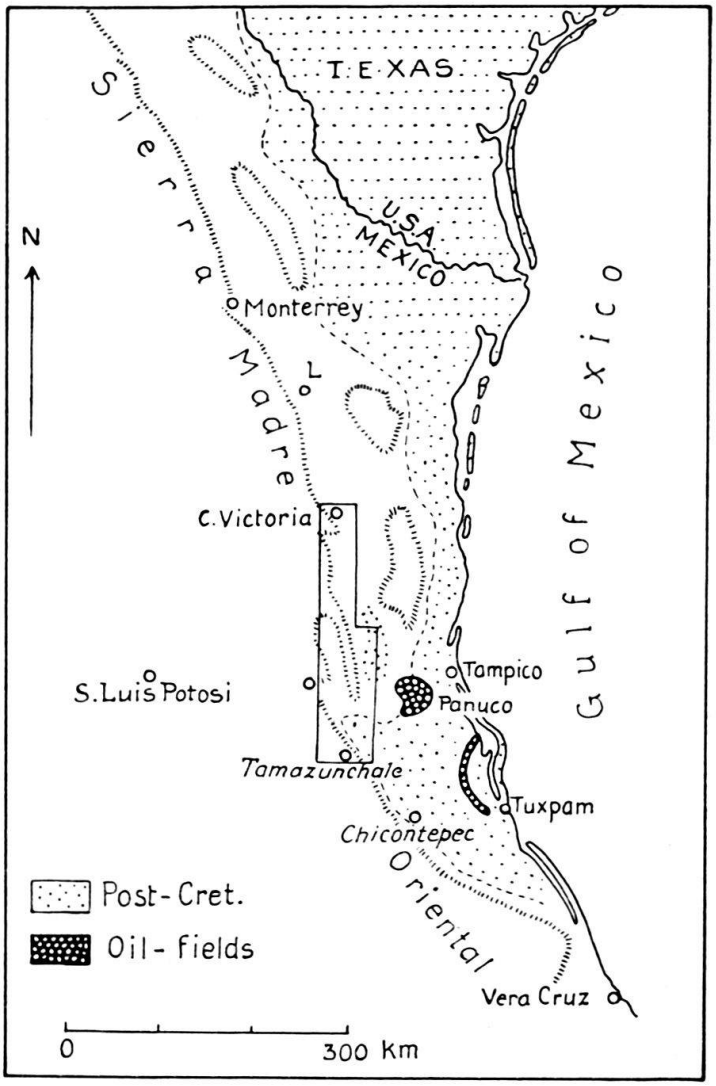

Fig. 1. *Index-Map.*

1:10000000.

The writer wishes to acknowledge the excellent and energetic collaboration of his assistents, Dr. H. JENNY † and Dr. W. FEHR. The map and the structural sections (Pl. XVI—XVIII) are joint work throughout.

Sincere thanks I ow to my colleague J. S. TURNER, B.S.C., F.G.S., now professor at Rangoon College, Burma. He not only has encouraged me to prepare the original report for publication, but has kindly reviewed my complete manuscript.