

Zeitschrift: Eclogae Geologicae Helvetiae
Herausgeber: Schweizerische Geologische Gesellschaft
Band: 33 (1940)
Heft: 2

Artikel: The front ranges of Sierra Madre Oriental, Mexico, from Ciudad Victoria to Tamazunchale
Autor: Heim, Arnold
Kapitel: I: Introduction
DOI: <https://doi.org/10.5169/seals-160029>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 17.08.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

	page
The Main Anticline from Monte Cristo to Chamal	337
The Sierra del Abra from Chamal to the Rio Tampaon	339
The Antiguo Morelos Syncline	339
The Sierra Nicolas Perez	339
The Nuevo Morelos Syncline	340
The Sierra Colmena and its Prolongation	340
The Sierra de Aquismón	342
The Overthrust of the Sierra de Xilitla	343
Tamazunchale	343
The Chicontepec Mountains north of the Rio Moctezuma	343
Summary and Conclusions	344
V. Summary of Geological History	346
VI. Petroleum	347
Surface Indications	347
Sulphur-Water	348
Drilling	348
Origin of Oil	349
VII. Appendix: Note on the Inner Ranges west of Victoria	349
VIII. References	352

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.

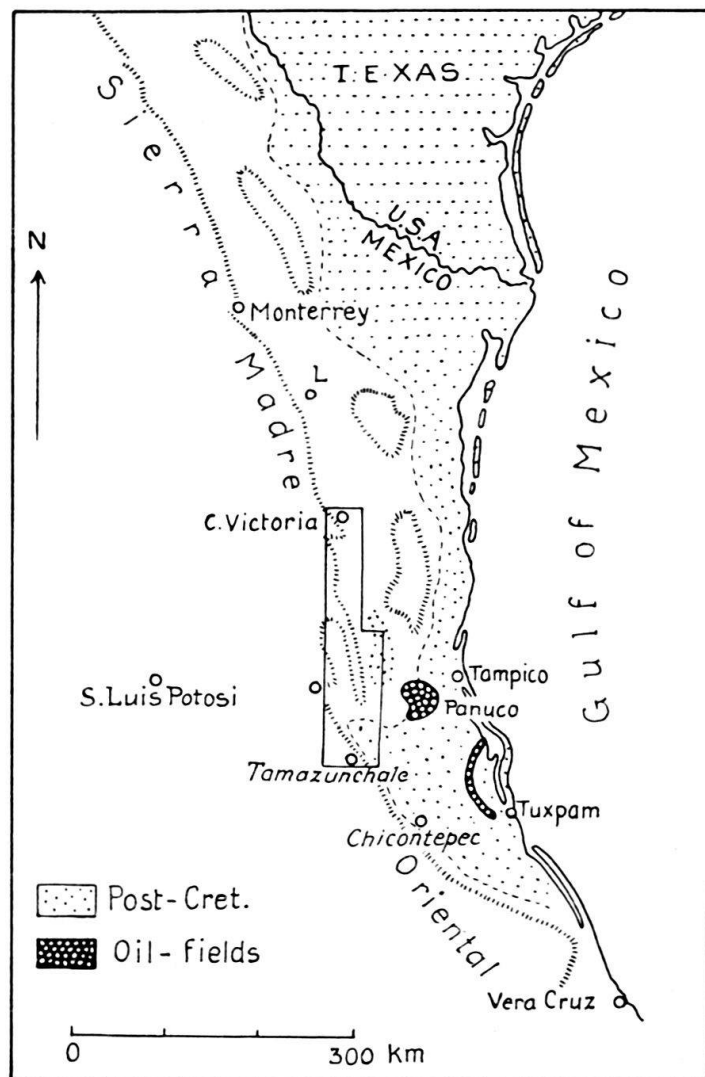


Fig. 1. *Index - Map.*

1:10000000.

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

Sincere thanks I owe 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.

