

REPORT ON A TRIP TO PORT VILA, VANUATU FOR THE HYDROCARBON GROUP

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by

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Techsec

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John Pflueger and Ken Havard visited the offices of the Department of Geology, Mines and Rural Water Supply in Port Vila from the 13th to the 20th of January, 1988. The main purpose of the visit was to collect data, examine the files available in Port Vila, and discuss the hydrocarbon programme with Mr Colin Clark, Director of the department.

In regards to the hydrocarbon programme, we discussed the division of CCOP/SOPAC and Tripartite areas of responsibility as established at the 16th session in Lae. The Tripartite partners will prepare an initial report on the hydrocarbon potential of Vanuatu. This will be reviewed by Techsec and then presented to the Vanuatu authorities. After receiving the report, Vanuatu will decide if it wishes a glossy brochure be prepared at that time or if it wishes to have further input and study by Techsec and/or Tripartite. We told Mr Clark that no personnel would be available from Techsec until early 1989 if he wishes further study.

Mr Clark will be vacating his post at the end of April and returning to the British Geological Survey. He is to be replaced by Mr Frank Coulson in July with some overlap occurring during April. We discussed the Tripartite proposal to visit Vanuatu in early 1988 to present a synthesis of the part I and II results. Mr Clark will contact the USGS to see if this visit can be arranged during the period of overlap with Mr Coulson.

Mr Clark pointed out that the Soviet research vessel the Akademik Alexandr Nesmeyanov had been given government approval to conduct a geophysical and geological cruise in Vanuatu waters during March -April, 1988. As he has no staff available to act as representatives for Vanuatu, he indicated that he intends to ask Techsec to provide an observer on their behalf. Also he may be requesting Techsec to provide observers on the three French cruises scheduled for 1988.

The only non-Vanuatu geologist at the department is Mr Stanley Temakon. He is currently at the University of Leicester in Britain doing a masters thesis on economic geology (mining). Mr Clark noted that there are no non-Vanuatu currently enrolled in earth science programmes. If scholarships at the BSc. level are now available, then he felt that suitable candidates could be found among the high school graduates.

As Mr Clark was unable to attend the 16th session in Lae, we asked if he had any other requests than those indicated in his current proposed work plan. He indicated that Vanuatu might have some interest in precious coral and manganese nodule surveys, but no monies are in the present budget to allow for the necessary local support such as vessels, crew and fuel. We suggested that he

might visit Techsec to discuss his other areas of interest, but he has no Funds available For travel. Vanuatu is not interested in Techsec involvement in shallow water engineering studies at this time. It is Mr Clark's feeling that Techsec should only be involved in "blue water" areas .

We discussed the possibilities for taking source rock samples. At present there is no rig with coring capabilities in Vanuatu. There is a rotary water-well drilling rig present and drift cuttings from water wells are retained by the department. However most of the samples are From the Pleistocene reef terraces which are the main aquifers on most of the islands. We suggested that an inventory of the cuttings be made to see if any of them penetrated underlying strata and which may be of use For source rock analysis. Mr Clark will also look into the Feasibility of deepening some of the Future water wells by a Few meters to sample underlying Formations. There is a possibility that a mining company will be bringing a diamond core drill rig into Vanuatu later in 1988 and the department will inform us if one does become available.

A recent draft of the Tripartite volume For Vanuatu was examined. It contains several new papers not present in the 1985 edition which we have at Techsec. Cruz Matos has sent a letter to Mr Gary Greene of the USGS requesting a copy for Techsec. In this volume, Greene and Falvey refer to oil seeps in Vanuatu. Mr Clark pointed out that the seep in question reported by Mitchelt in 1971 as a sighting offshore Malekula, is unconfirmed. We suggested that Mr Clark attempt to confirm whether or not the seep exists and if at all possible obtain a sample for chemical analysis. IF a bona Fide oil seep could be confirmed, it would do more for oil company interest in Vanuatu than alt the other studies made to date.

Vanuatu has draft hydrocarbon legislation in place (prepared by CFTC in 1983). However, it has been a low priority item to date and Mr Clark estimates that it would take at least another year to get it passed. We emphasised the necessity of having a law in place before any oil companies would show interest. We will send a copy of the hydrocarbon terms in effect in neighbouring countries to Port Vila once they are compiled at Techsec.

The publications list of the department was examined and compared to what we have on File in Suva. All publications are at Techsec except For two recent ones which have already been Forwarded to us by Mr Ctark. The geological maps available will be compared to our library copies to see if any are required For Techsec.

All of the seismic data available in Vanuatu were viewed to enable a First-glance assessment of the hydrocarbon potential or the country. These data were:

Magellan 1969 single cover airgun, Mobil 1972 3-fold airgun, Gulf 1972 12-fold airgun Tripartite I 1982 24-fold airgun

Additionally, the single-trace monitor sections to the 1984 Tripartite II multifold data were viewed. Data from the various cruises sponsored by ORSTOM were not available.

The most prospective part of Vanuatu from the hydrocarbon standpoint in the near term is the shelf on the eastern side of Espiritu Santo Island, extending in a narrower fashion down the eastern side of Malekula Island.

The North and South Aoba Basins and the Vanikolo Basin appear to enjoy relatively thick sedimentary sequences but are all overlain by deep water which ranges in depth from 5,000 to 10,000 feet. While the technology for drilling and completing wells in

these water depths is available, it is unlikely that the high-risk deep-water Vanuatu basins would interest oil company executives in the near future, given the worldwide glut in producible oil. This was discussed frankly with Mr Clark.

Recommendations:

1. That techsec, Vanuatu and Tripartite should hold a meeting to discuss the current status, format, future requirements and responsibility for the Vanuatu hydrocarbon potential assessment and follow-up programme.
2. That Techsec and Vanuatu shall co-ordinate a sampling programme to take further source rock samples once drilling equipment becomes available.

Conclusion:

1. Vanuatu will attempt to collect samples of the reported seep.