

July 20, 1970

**South African Department of Foreign Affairs,
Announcement by South African Prime Minister
Vorster**

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Summary:

Announcement by South African Prime Minister Vorster outlines the country's approach to marketing and selling enriched uranium. He describes a unique process by which South African scientists can create a highly enriched "uranium concentrate."

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ANNOUNCEMENT BY THE PRIME MINISTER

1. In view of South Africa's large deposits of uranium, one of the most important objectives of the Research and Development Programme of the Atomic Energy Board, which was launched in 1959 with the approval of the Government, was to process South African uranium to a form more advanced than uranium concentrate. Important progress was made in this regard and was in fact reported on from time to time by the Chairman of the Board.

2. It is well known that a number of countries are carrying out research and development work in the field of uranium enrichment, i.e. to process uranium to its most sophisticated form. In many countries this work is being done without their having the motivation of an own uranium production, which South Africa has in no small measure. It is therefore obvious that the Atomic Energy Board would concern itself with this subject particularly for two reasons:-

- (1) As a result of the increased demand for uranium in the enriched form, it is obvious that South Africa, as one of the largest uranium producing countries in the world, will consider it in its own interest to market uranium in the enriched form.

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(ii) South Africa finds itself on the eve of a large nuclear power programme of its own - of the order of 20,000 MW (electrical) by the end of this century. If such a programme can be based on enriched uranium, it will result in a very marked capital saving. However, such a course can only be followed if the supply of enriched uranium can be guaranteed, which, in the difficult world in which we live, implies own production.

3. Scientists of the Atomic Energy Board succeeded in developing a new process for uranium enrichment, as well as the extensive associated technology, and they are presently engaged on the building of a pilot plant for the enrichment of uranium based on this process.

South African scientists have thus again added to the prestige of their country. In the past they have made lasting contributions to science, but perhaps the achievement that I am announcing today is unequalled in the history of our country.

To appreciate to some extent the scope of the achievement of the scientists of the Atomic Energy Board, I need only mention that because of the enormous costs of uranium enrichment, only the United States of America, the United Kingdom and France in the Western World

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have such plants. The plant in France, which was the latest to be erected in the West, and which is appreciably smaller than the U.S.A. plants, cost approximately R700 million (development costs included). The high cost stems on the one hand from the development and application of the sophisticated technology associated with uranium enrichment and which is kept strictly secret by those who possess it, and on the other hand from the fact that uranium can only be enriched at a reasonable cost in very large plants.

The South African process, which is unique in its concept, is presently developed to the stage where it is estimated that under South African conditions, a large scale plant can be competitive with existing plants in the West. What is more important is that the process still holds appreciable possibilities for further development, and research and development to achieve this are continuing.

4. It is not possible to mention the names of all the scientists and technical personnel who contributed to this important development. However, I would like to mention two who were associated with the project from the beginning and are still guiding the development. They are Dr. A.J.A. Roux and Dr. W.I. Grant. Dr. Roux, at present Chairman of the Board, initiated the development

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when he called a meeting of Heads of Divisions in the early sixties and requested them, in the light of the importance of uranium enrichment for South Africa as a large uranium producer, to consider alternative processes for uranium enrichment. One of the heads at that time, Dr. W.L. Grant, presently Director-General of the Board, proposed the principle of the new process. Under the general guidance of Dr. Roux, the work was continued and in his present capacity as Chairman, he still devotes a great deal of his time to the promotion of this project, of which a multitude of aspects call for his personal attention. From the start Dr. Grant was project leader, a task which he, together with his team of scientists and technical personnel, carried ^{through} /with vigour to eventual success. These two scientists - a complementary team - who have been closely associated for 22 years in the service of science in South Africa, have through their combined effort and guidance made possible this important development - a development which nevertheless would never have succeeded had it not been for the real contribution (in some cases very important), zeal and loyalty of the personnel who were associated with the project.

5. In making this important announcement, I would again like to emphasise, as has so often been done by the Government, that South Africa's research and development

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programme in the field of nuclear energy is directed entirely towards peaceful purposes. I would like to go even further. South Africa does not intend to withhold the considerable advantages inherent in this development from the world community. We are therefore prepared to collaborate in the exploitation of this process with any non-communist country(ies) desiring to do so, but subject to the conclusion of an agreement safeguarding our interests. However, I must emphasise that our sole objective in the further development and application of the process would be to promote the peaceful application of nuclear energy - only then can it be to our benefit and that of mankind.

I also wish to state emphatically that South Africa is prepared to subject its nuclear activities to a safeguards system including inspection, subject to the conditions that:-

- (i) South Africa will in no way be limited in the promotion of the peaceful application of nuclear energy.
- (ii) South Africa will not run the risk of details of the new process leaking out as a result of the safeguards inspection system.
- (iii) The safeguards system, while efficient, is to be implemented on such a reasonable basis as to avoid interference with the normal efficient operation of the particular industries.

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South Africa has not yet acceded to the Non-Proliferation Treaty, and has on various occasions clearly stated that it would consider participation as soon as the safeguards system to which South Africa would be subjected, is known. The International Atomic Energy Agency is at present devising its safeguards system, and as soon as its nature and scope are known, South Africa will seriously consider accession to the Treaty in the light of the foregoing exposition.

6. In conclusion, I would like to mention that during the present session of Parliament an Act will be introduced by the Minister of Mines to establish a corporation for the enrichment of uranium and to provide for matters incidental thereto.