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**JORDAN** 

SUCCESS OF POTASH PROJECT REPORTED

London 8 DAYS in English 9 May 81 pp 22-23

[Article by Steve Ross]

[Text] Steve Ross reports on the success of the Arab Potash Company at the Red Sea, thanks to shrewd pre-planning five years ago.

THE SOUTHERN Ghor area of Jordan, near the bottom end of the Dead Sea, used to be sparsely-inhabited wastelands. This, the lowest spot on earth, had little fresh water and almost no vegetation. Its only inhabitants were Bedouin nomads who would move east during the summer to the cool of the hills. Foreigners were rarely, if ever, seen.

Now the area bustles with activity. Lorries roll back and forth 24 hours a day. Cranes, welders and all the paraphernalia of steel construction are in constant use. There is a permanent community of expatriate engineers at the self-contained township of the Arab Potash Company (APC), whose extraction plant project has brought construction expertise from around the globe.

The Palestine Potash Works on the Israeli side of the salt lake have been in operation for as long as most residents of the area can remember. But the attempt to exploit the Dead Sea's potassium chloride on the Jordanian side is relatively recent. The APC was formed in 1956 but for various reasons, including politics, lay dormant until 1976. Now it is going full blast and is expected to be producing commercially by the second half of next year.

The chairman of the APC's board. Ali Khasawneh, says with pride that the potash project is 'progressing exactly according to schedule in time and budget'. He credits the project's promptitude to preplanning. shrewd ordering of priorities when awarding contracts and drawing up the overall work schedule. Specifically, he cites the decisions to build access roads, dykes and the residential township before anything else, and to order equipment for the refinery straightaway.

The American firm, Brown and Root, completed the first contract, roads and dykes, in 1978. The second contract, for the township, which also started three years ago, is now nearly completed, built by the Shin Sung Corporation of South Korea, with design and consultancy by Gibb-Petermuller (Athens associates of the UK firm, Sir Alexander Gibb & Partners). By beginning work on the township early, the APC was able to cut the on-site time of all other contractors by providing them with accommodation.

Among the 10 remaining contracts, George Wimpey International of Britain is constructing civil works — dykes and solar pans — for the potash evaporation process, with Alexander Gibb as consultants. Jacobs International of Pasadena and Dublin is in charge of process design, commissioning and training for the refinery. Its steelworks are being done by Voest Alpine of Austria. Brown Boveri has constructed an 8MW power station, with the British firm, Hawker-Siddeley, providing cabling, extensions and sub-stations. Balfour Beatty of Britain has undertaken civil works for the refinery.

Extracting potash starts with collecting salt brine at the northern end of the Lisan peninsula, whence it flows along the MINISTER'S BROTTIER WOUNDED IN BEIRUT-It has been learned in Beirut that the brother of Bahraini Foreign Minister Shaykh Muhammad ibn Mubarak al-Khalifah was wounded last night when he was subjected to an assassination attempt near al-Rawshah in Beirut. He was hit with three bullets and taken to the hospital. It has been learned that his wounds are not serious. [Text] [JN050809 Monte Carlo Radio Monte Carlo in Arabic 0800 GMT 5 Jun 81]

SECURITY CORPORAL KILLED—An official source at the Interior Ministry has stated that public security Cpl Jum'ah Nafi' was attacked by unknown assailants and stabbed in the abdomen with a sharp instrument while on foot in Manama's Al-Makhariqah District at 0200 on 2 June. He was wearing civilian clothes when the attack occurred. A police patrol found him lying on the ground in the same street. He was immediately taken to the hospital but was dead on arrival. The Interior Ministry, while deploring this ugly crime—the attack on a public security officer who was carrying out his duty—stresses that it will diligently pursue criminals and will punish them severely in order to deter them and those like them who may think of tampering with the country's security. [Text] [GF031256 Manama AKHBAR AL—KHALIJ in Arabic 3 Jun 81 p 1]

NEW EDUCATION MINISTER--Manama, 23 May (QNA)--His Highness Bahraini Amir Shaykh 'Isa Ibn Salman al Khalifah has issued a decree appointing Dr 'Ali Muhammad Fakhru education minister in addition to his position as health minister. Reporting this today, Bahrain Radio said that Dr Fakhru is replacing the late Shaykh 'Abd al-'Aziz Ibn Muhammad al Khalifah, who passed away recently. [Text] [JN231755 Doha QNA in Arabic 1445 GMT 23 May 81]

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23

peninsula's western edge to the huge (30 sq km) salt pan. In this, and two pre-carnallite pans of decreasing size (to allow for slower evaporation as specific gravity increases), the brine is concentrated by solar evaporation. Finally it flows into three carnallite pans, from which the sludge is collected and sent to the refinery. Here, through a complex thermo-chemical process, the potash is extracted and converted to its final crystalline form.

After trials, scheduled to start at the end of 1981, the plant will start producing at 20 per cent capacity. In the second year this will go up to 70 per cent, and in the third year it is expected to operate at full capacity of 1.2m tonnes of potash a year. Marketing has already been allotted to three firms: Woodward and Dickerson of the US. Mitsubishi of Japan and Enterprises Minières et Chimiques of France. Khasawneh expects the company's products to bring in 'about \$200m a year'.

'At the end of February 1982, there will not be a single contractor left on the site.' says Khasawneh. But for now the APC township is a transient expatriate community of foreign engineers and their families, living in air-conditioned comfort at a complex complete with sports centre, bank, clinic, post office and one of the best-stocked supermarkets in Jordan. The contractors have handed over 200 out of 350 of the cement-block houses, painted a durable dark beige and remarkably luxurious inside.

The only hitch in the construction schedule is in the contract which has just started, to build a hospital, guest home and mosque. Shin Sung is running a bit late and will finish about a year behind schedule, according to Roger Harman, Gibb-Petermuller's resident engineer.