



# The sun, sea and TNCs worth their salt

By H.M. Thompson and Trevor Hogan

The first article in RMR's series on Industrial Minerals presents: Salt, one of the low-cost, high-profit minerals of growing importance to the economic development of the capitalist world.

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"Even its basic make-up defies logic. Salt is a blend of sodium and chlorine — the first a metal so unstable that it bursts into flame when exposed to water; the second, a lethal gas. When we swallow the blend, it forms hydrochloric acid in our stomachs. Suicidal? No, an absolute necessity for life."<sup>1</sup>

## Introduction

In this article we examine the industrial structure of the salt industry in the north-west corner of Australia known as the Pilbara region of Western Australia. This area is predominantly recognized as one of the most significant iron ore mining regions in the world, servicing the needs of the Japanese steel industry. Further north in a region known as the Kimberley, the largest diamond deposit in the world has been discovered, is being developed, and will start production in 1985. Off the Northwest Shelf of Australia, a huge discovery of natural gas has been found and will also be put into production during the 1980s for export to Japan and for Australia's domestic needs. Given the immensity of these projects, the relatively small salt industry has been hidden from view, so to speak, and given little attention by academic or media sources.

Characteristically, the resource base of Australia is owned and controlled by transnational corporations of American, British and increasingly Japanese origin and the Pilbara region is no exception to the rule. A formal commitment by the Commonwealth government to 50 per cent Australian equity in mineral projects since the Labor party took the initiative in 1972-75 has slowed down the increase of foreign capital accumulation in Australia. But the most recent figures available still put the foreign control of Australian mining at 59 per cent. As will be indicated the salt industry in Western Australia is almost totally dominated by United States, British and Japanese capital.

## Sodium chloride — humankind's most important mineral

Sodium is the third most abundant metal in the earth's crust, after aluminium and iron, and sodium chloride — salt — is the most common mineral. Salt is a basic and essential ingredient of human diet, a universal food preservative, and required as an input to a vast range of industrial commodities such as glass, soap, paper, aluminium, steel-making, chemicals and plastics. The annual human requirement is of the order of 5 kilograms. Yet, of the total recorded world production of salt (180 million tons), no more than 3 per cent is estimated to consist of table salt.

## The early history of salt production

Concentrated salt production from brines can be traced back to the Bronze Age, or about 3500 B.C. Through the Middle Ages in Western Europe salt was used in the preparation of leather, the rubbing of chimneys, the soldering of pipes and gutter junctions and the manufacture of distillates from wine. Above all it was used to preserve and flavour food of almost every description. It was the massive herring catches from the waters of the Baltic and North Sea which were either packed in salt or cured for future eating. Two areas in particular were predominant in the herring fisheries. One, situated in the western Baltic was organized in the south-Swedish province of Skåne. The other was situated off the east coast of England. Immense quantities of salt were required for this curing process. Consequently, the great centres of salt production, trade and storage from the Middle Ages up to the beginning of the 20th century were established close to the main fishing grounds. Three principal centres were in north Germany, the coast of the Low Countries and the east coast of England.<sup>2</sup> During the 19th century most British salt came from the infamous salt mines, where women and children were employed in narrow and confined spaces for as long as sixteen hours per day.<sup>3</sup>

Georgius Agricola writes in his book  
*De Re Metallica*, first published in 1556:  
 "... we ought to make as much salt as  
 we can sell."



A—SEA. B—POOL. C—GATE. D—TRENCHES. E—SALT BASINS. F—RAKE.  
 G—SHOVEL.

The authors became involved in researching the salt industry due to the request by workers in the industry to assist them in understanding the industrial structure and industrial relationships of salt production on both a local and international scale. This knowledge would then be a basis for action and struggle at the point of production and distribution.

The exercise has been extremely useful for the workers on site as the companies themselves have been de-mystified; company information has been tested and in many cases negated; union representatives have become more knowledgeable and skillful at negotiations; the strengths and weakness of capital have been cogently and coherently identified; and the process of working together has increased class solidarity on site and eliminated many of the hang-ups connected to the mental-manual division of labour, artificially created and exploited in all capitalist social formations.

In that spirit the authors wish to share some of the information, gathered in this exercise, with others working to reduce and eventually eliminate the exploitation of the working class throughout the world. Not only has the development of world capitalism provided for the concentration and centralization of production, distribution and exchange; but even more seriously, it has provided for the concentration and centralization of information and knowledge. If working people are going to take control of their lives, they must capture and analyze the knowledge and information which presently belongs to capital alone.

#### Acknowledgement

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## Industrial uses

Important as salt has been during the life of humanity for consumption and food preservation, it is really within the past hundred years in which this mineral has become a support for industrialization. In 1900, about 15 per cent of salt production was used industrially. This figure increased to 60 per cent by 1950, and now stands at nearly 80 per cent of total consumption. In 1875, thousands of tons were used to salt the herring harvest from the North Sea. Today, millions of tons are used to keep the wheels of industry turning throughout the world.

It is in the 20th century wherein the production of salt has become concentrated and centralized in the hands of a few large, conglomerate transnational corporations. These corporations quickly recognized that the importance of salt went far beyond immediate human consumption. The importance of salt to these companies lies in its industrial use, particularly as a source of chlorine and sodium to the chemical sector.

Chemical uses are much the most important in quantity, accounting for over 60 per cent of U S consumption, 75 per cent of European, and 80 per cent of Japanese consumption. The chemical industry worldwide accounts for as much 70 per cent of total world consumption. Chemical uses are dominated by three products: *chlorine*, *caustic soda* (sodium hydroxide), and *soda ash* (sodium carbonate). Caustic soda and soda ash account for about 90 per cent of salt consumption in chemical industries,<sup>4</sup> chlorine for another 5 per cent.

In the production of chlorine by electrolysis, the co-product is caustic soda. The production of synthetic sodium carbonate and caustic soda results in the by-products of chlorine or calcium chloride.

Chlorine is used for water purification, bleaching for wood pulp in paper manufacture, solvents, plastics, pesticides and automatic fluids. Sodium chloride and so-

dium hydroxide are used for quenching steel, sodium cyanide is for carburizing and case-hardening. Caustic soda is used for the manufacture of soap and rayon, digestion of wood in the pulp and paper industry, production of alumina from bauxite, and in the refining of petroleum.

Additional less important uses of salt include snow and ice control which supplies a major demand for rock salt in the temperate Northern countries, human food processing and animal feeding stuffs.

## World production and trade

Salt is relatively cheap to extract. The cost of transport, therefore, forms a significant proportion of the total delivered cost of salt, particularly the bulk grades of chemical salt. The effect of these factors is that whenever possible salt is produced as close to the market as possible or, alternatively, that industries dependent on salt are established near the major salt deposits. As a consequence, international trade in salt, though substantial in

**Table 1**

**Countries which produced over 1 million tons of salt in any of the years 1975–80, and their average production as a percentage of the world total.**

Country	Production 1978 (000 tons)	% of world total
USA	38 931	22.9
China	30 000	17.7
USSR	15 500	9.1
FRG	12 409	7.3
UK	8 000	4.7
France	6 500	3.8
Canada	5 933	3.5
Australia	4 800	2.8
Mexico	4 500	2.6
Rumania	4 500	2.6
Italy	4 200	2.5
Poland	3 900	2.3
Spain	3 200	1.9
Netherlands	3 111	1.8
GDR	2 600	1.5
Brazil	2 500	1.5
India	1 757	1.0
Bahamas	1 670	1.0
Japan	1 056	0.6
Colombia	614	0.4
Argentina	604	0.4
<b>Total – 21 countries</b>	<b>156 285</b>	<b>92.0</b>
<b>Others</b>	<b>13 571</b>	<b>8.0</b>
<b>Estimated world total</b>	<b>169 856</b>	<b>100.0</b>

Sources: United Nations Yearbooks of Industrial Statistics and Commodity Production Data.

total volume, is small in relation to world production. In 1981, world production would be of the order of 180 million tons. Total international trade is only about 10 per cent of this, or about 18 million tons per year. Of this amount, about 9.5 million tons is accounted for by trade between Mexico, Australia and Japan. (See Tables 1 and 2).

At present, about 25 per cent of the world export of salt is made by four companies in Western Australia and shipped primarily to Japan and a number of other nations in the Pacific Basin. One company in Mexico, Australia's major competitor, provides another 25 per cent of world exports; again predominantly to Japan. Of 18 million tons traded internationally Mexico presently provides 5 million and Western Australia 4.5 million to Japan alone.

### Methods of production

Salt is recovered by three principal methods: *shaft mining*, *solution mining*, and *solar evaporation*. The latter method is the one used in the Pilbara.

Shaft mining uses methods similar to those used in coal mining. A shaft is sunk to the rock salt vein and techniques of cutting, drilling, blasting and loading are used to remove the salt for further processing. There are large underground deposits in Europe, Asia and North America.

Solution mining obtains brine for further processing by pumping water into a rock salt deposit, dissolving the salt, and bringing the brine to the surface. Brine serves as the raw material for salt as it is normally saturated with sodium chloride. Its main impurity is calcium sulphate, which is almost always associated with salt deposits.

Solar evaporation, the method found in the Pilbara, is confined to those geographical areas that have a proper combination of meteorological conditions, land availability, and accessibility to markets. Large and relatively level land areas, with reasonably impervious soil, are required. The sun is used as a source of energy for the continuous process of evaporation.

After seawater has been pumped into a large intake pond, it undergoes progressive concentration by evaporation as it is made to flow through a series of concentration ponds. In the final two ponds the brine is saturated with sodium chloride. It is then pumped into crystallizing ponds where further evaporation occurs and a bed of salt crystals is formed some 25 centimetres thick. 60 tons of seawater produces 1 ton of salt in a two-year period.

**Table 2**

**Salt exports and their destination for principal countries, 1978.**

Country of destination	Exporting Countries (000 tons)											Total
	Australia	Canada	China	FRG	India	Mexico	Netherlands	Spain	Tunisia	UK	USA	
Canada						294		25			873	1 192
Denmark				76			21	32	38			167
Finland				26			243	5	17	55		346
France				7			10					17
FRG							606					606
Indonesia	38				10							48
Italy				1			3	124	81			209
Japan	3 245		462			2 791						6 498
South Korea	296				30							326
Malaysia	27			2	4							33
Nigeria				22			5			88		115
Norway				23			126	61	33	39		282
Philippines	63			1								64
Singapore	11				144							155
Sweden				425			370		1	148		944
Taiwan	365											365
UK				7				2				9
USA		1 604				1 146		309				3 059
<b>Total</b>	<b>4 045</b>	<b>1 604</b>	<b>462</b>	<b>590</b>	<b>188</b>	<b>4 231</b>	<b>1 384</b>	<b>558</b>	<b>170</b>	<b>330</b>	<b>873</b>	<b>14 435</b>

Sources: United States Bureau of Minerals and United Nations Yearbooks.



The salt is removed from the crystallizing ponds by a mechanical harvester and fed onto road trains, each of which holds about 90 tons, which take the salt to a washing stack. Here it is washed by sprays to remove potassium, magnesium salts and solid gypsum. Reclamation for ship loading is then handled by bull-dozers and front-end loaders to a conveyor system under the stockpile. Average loading is at a rate of 2 000 tons per hour. At the port, ships of up to 75 000 dwt can be accommodated.

### The world salt industry

Total world production of salt has been estimated to have increased from about 147 million tons in 1970 to about 174 million tons in 1979. This represents a rate of growth of 2 per cent annually, and this growth rate is expected to continue through the first-half of the 1980s.<sup>5</sup>

Distribution of this production by continent is as follows:

	%
Europe	39
North America	31
Asia	23
Oceania	3
South America	3
Africa	1 <sup>6</sup>

Being an essential ingredient of human and animal diets, salt has always been regarded as a valuable commodity despite its relative cheapness. This has resulted in the establishment of state monopolies for supply or production in many countries, or the imposition of special salt taxes.

Fifteen countries account for over 95 per cent of world consumption, the largest user being the United States (See Table 3). Of these nations, most produce over 95 per cent of their own consumption. In the remainder, imports and exports are roughly balanced. One glaring exception is Japan which produces only about 15 per cent of its required uses. Japan is one of the few nations in the developed capitalist world to depend almost completely on salt imports for its consumption. Nations in northern Europe such as Sweden, Finland and Norway are also totally dependent.

Because the majority of nations are self-sufficient, international trade in salt is small relative to world production (of the order of 10 per cent). Major international movements fall into two main groups. The first consists of movements in both directions across the U S-Canadian border and trade within Western Europe. The latter includes movements in

both directions between France and Germany. The second group, accounting for about one-half of all international trade in salt, is dominated by shipments of bulk salt from Australia and Mexico to Japan.

Salt deposits are so widespread and plentiful that it is one of the very few minerals which may be said to be unlimited.

Table 3

Production as % of consumption, 1975 (15 largest consumers)

USA	—	95.6
China	—	101.3
USSR	—	100.6
FRG	—	97.1
Japan	—	14.5
UK	—	107.0
India	—	103.9
France	—	99.6
Canada	—	94.0
Italy	—	100.3
Poland	—	107.1
Romania	—	121.5
Spain	—	101.2
GDR	—	108.4
Brazil	—	100.0

Source: US Bureau of Mines, *Minerals Yearbook*, 1978-79.



**Australia at work.**

ed. Apart from the vast deposits of rock salt in many parts of the world, the extraction of salt from seawater is limited only by the availability of suitable land space for solar evaporation to take place, and by the cost of transport to market.

### Chemical TNCs in the salt industry

Because of the importance of salt to the chemical industry it is not surprising that some of the major producers of salt for internal use are the transnational chemical companies themselves.

- *Imperial Chemical Industries Ltd. (ICI)* is one of the world's largest, and Britain's largest chemical company. Its general chemical division requires a wide range of speciality chemicals and industrial minerals of which salt is one. ICI is a producer of rock salt and solar salt in Europe and Australia and has the largest capacity of any salt producer in Britain. ICI is capable of producing 9.2 million tons per year, for instance, compared to British Salt which has a 1.1 million ton per year capacity.

- *Dow Chemical Company* is a major United States producer of organic and inorganic chemicals. In order to supply itself with raw materials, Dow owns natural brine and rock salt deposits in the U S, Canada and Germany. The other major salt producers in the U S include *Cargill, Inc.*, *Great Salt Lake Minerals and Chem-*

- icals Corporation, International Salt, Carey Salt* and *Morton Salt*. Also, the American Occidental Petroleum Corporation and the Polish government are studying the feasibility of a joint venture to develop rock salt deposits in Poland. The amount of domestically produced salt in the U S amounted to 46 million tons in 1979 with a value of 538 million USD.

- *Bayerische Anilin und Sodafabrik AG (BASF)* one of the big three German chemical companies has traditionally specialized in petrochemicals, industrial chemicals, plastics and dyestuffs. One of their major divisions, agricultural chemicals, includes the production of rock salt and potash (3 million tons per year).

- *Solvay and Cie, S.A. (S & C)* is a major chemical company in Belgium producing salt for industrial processes, de-icing roads, table and kitchen uses and water softeners. In 1978, the salt division accounted for 9 per cent of total product sales for S & C. Total product sales were 95 billion BFR with net profits of 3.2 billion BFR. The largest rock salt mine in the Federal Republic of Germany is owned by Solvay and Cie. This mine at Borth has a capacity of 4 million tons per year. Other producers of salt in the Federal Republic of Germany include *Sudwestdeutsche Salzwerke*, *Wacker Chemie GmbH*, and *Kali und Salz* in Niedersachsen.

- *Ranks Hovis McDougall Ltd. (RHM)*, the

largest flour miller in Europe and largest bread maker in the United Kingdom also produces table salt for Europe, Australia, New Zealand and South Africa (Cerebos and Saxa labels). In 1978 RHM had sales of 1.2 billion GBP and net product profits of 31 million GBP. RHM owns 25 per cent of British Salt Ltd.<sup>7</sup>

### Price formation

There is no established 'world price' for salt. The main indicators for current prices for bulk salt are the selling prices from Mexico and Western Australia to Japan. At present the price ranges between 12–13 USD/ton. Prices per ton are likely to continue to be the subject of hard negotiation between Japanese trading companies, and the Mexican and Australian companies and governments. All sales are conducted by the salt companies via Japanese trading companies to end users. Under the Customs (Prohibited) Exports legislation, the Commonwealth government administers export controls over salt with the aim of ensuring that exports of salt are "sold at fair and reasonable world market prices."

In November 1975, the Mexican government insisted that the minimum FOB price be increased from 4.98 to 7.00 USD/ton. In December, the Australian government countered this move by raising the minimum price level for salt exports from Australia from 6.11 to 8.13 USD/ton

*Photos on pages 80 and 81.*

*Only the TNCs have access to the most modern technology. Manual work at a saltern in India.*

*Mechanised salt harvest at the CRA plant at Dampier, WA.*

fob to maintain the freight differential between Mexican and Australian prices. The Japanese buyers protested vehemently at the Australian government's move, and made it clear that increased purchases would be made from Mexico when demand improved. To this day, as a type of economic punishment, the Japanese continue to buy slightly more from Mexico than from Australian producers on a yearly basis.

It is interesting to note that at present the cost of transport per ton from Australia to Japan is slightly greater than the full fob price. The cost of loading, transport, insurance, commissions, and unloading takes the price of bulk salt to about 29 USD/ton cif.

At the present time there is considerable overcapacity in both Mexico and Western Australia. The competition between the sellers provides for what is basically a buyers market. This situation is likely to continue during most of the 1980s. Many factors will play a role here, not least of which is the world economic situation and the price of energy. An upswing in world economic activity could dramatically increase Japanese demand for salt imports. And further price increases in energy provide for higher costs of bulk commodities being transported. Higher transport costs would damage Mexico much more than Australia with respect to the Japanese market.

### **The Pilbara**

The region in Western Australia known as the Pilbara is an isolated area about 2 000 kilometres north of the most isolated city in the world, Perth. The region covers an area of 457 238 square kilometres that extends as a broad strip across Northwest Australia from the coast to the Northern Territory border. The eastern half of the region is a semi-desert. The western segment is the site of some of the most productive and highly mechanized iron ore mines in the world. Dotted along the coast are the three major salt operations, again

among the largest and most mechanized solar salt mines in the world. The fourth salt company is in the southwest.

The Pilbara, is a semi-tropical area – a harsh, hot, dusty environment in which to live and work. For eight months of the year the temperature stays within the range of 35–40°C. It is only within the past 20 years that the population has grown from a few thousand to close to 50 000 at present. The population continues to grow rapidly and is expected to reach 100 000 by the turn of the century.

The earliest European visitors to the region were not very impressed. The coastal area was visited by a procession of Portuguese, Spanish, Dutch, English and French mariners sailing the main trade routes of the East. "It repelled most of them and disillusioned the one who showed the most interest, the English buccaneer William Dampier. In 1688 Dampier sailed along the coast in the *Cygnets* and noted the 'dry and dusty' soil and savage people of 'very unpleasant aspect', the worst he had encountered."<sup>8</sup> Since then, of course, the region has become one of the major mineral producing centres of the capitalist world.

### **The Australian Salt Industry**

More than any other industry in Western Australia, the salt industry is characterized by secrecy and confidentiality. This is due to the competitiveness which exists in the world market and to the nature of some of the companies themselves and to the role they play in Australia and in the world as a whole. This fact has made it extremely difficult to gather up-to-date, useful and correct information. It is a disturbing situation when the workers within an industry, in many instances, do not even know for whom they are working. Between 1970–78, Australian production of salt increased by 56 per cent, an average annual rate of increase of 5.7 per cent. This is more than double the world annual increase of production of salt. Australian production is primarily exported, 85

to 90 per cent of Australia's annual output is shipped overseas. Japan is by far the most important destination, taking as much as 80 per cent of Australia's exports of salt each year.<sup>9</sup>

The rapid expansion of Australian salt production has been almost entirely a response to Japanese demand. The salt industry of both Mexico and Australia has developed a dependency on Japanese demand and investment. In fact, Japan was initially responsible for encouraging the establishment of a salt industry in the Pilbara in the late 1960s. Given the situation that the four major companies in Western Australia have all developed into a significant exporting industry, there has been a continuing history of oversupply. The Japanese have been able to use this to their advantage in price negotiations. This has resulted in the companies operating on a narrow margin of profit and incurring large losses during many of their years of production. Actual profit and loss figures are difficult to calculate, given the secrecy which pervades the industry, but attempts will be made to provide the most up-to-date information when analyzing the company structures.

The salt export industry is presently dominated by three companies in the Pilbara region:

*Dampier Salt Ltd.*, 4.6 million tons/year capacity.

*Leslie Salt Co.*, 2.0 million tons/year.

*Shark Bay Salt Joint Venture.*, 750 000 tons/year.

All of these companies use the process of solar evaporation for the production of salt. A smaller company, operating in the southwest part of the state, *Lefroy Salt Pty. Ltd.* will be ignored for purposes of this article. The three major firms hold a joint capacity of nearly 7.5 million tons/year, which would be approximately 75 per cent of the total national capacity for the production of salt.<sup>10</sup>

Salt mining is a highly capital intensive industry employing only 709 persons in Australia on 23 different mining estab-

ishments. Of the total number employed, 91 per cent were males. The salt fields are all in relatively isolated locations, requiring substantial infrastructure for development, consisting of ship handling and loading facilities, roads, housing and power supply. Salt is transported by road, rail and conveyor, and is exported through ports at Port Hedland, Dampier, Cape Cuvier and Useless Loop.

In 1980, Japan purchased about 5 million tons from Mexico and 4.5 million tons from Australia. The price to Australian producers, at present on a variety of short-term contracts, ranges between 12.00–13.00 USD/ton. Although the market remains depressed in 1981, all of the companies seem to have gained relatively secure niches in the world market.

#### Company profiles

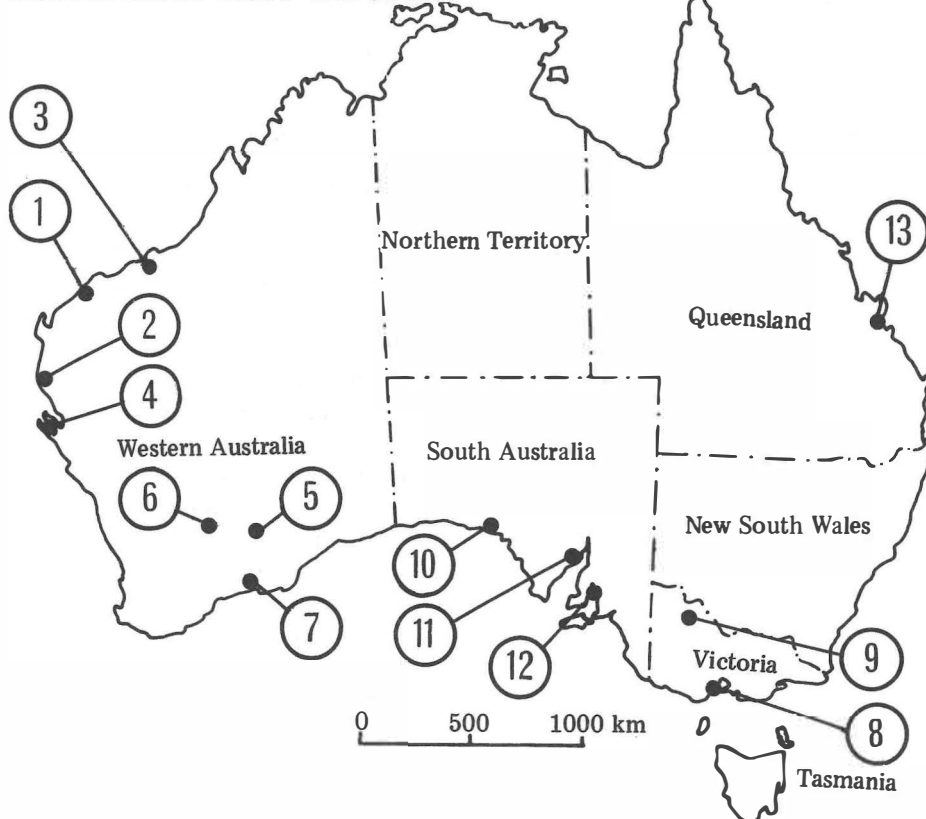
- *Dampier Salt Limited (DSL)* is the largest producer and exporter of salt in Australia. The company runs two sites in the northwest, one at Dampier and the other at Lake MacLeod near Carnarvon. The Dampier field with an area of 90 square kilometers is the world's second largest field. It was established in 1967 and started producing in 1971. The field at Lake MacLeod was added to the Dampier operation in 1978 and put into continuous operation in 1981.

The capital investment to get both fields into operation amounted to about 40 million AUD plus the purchase price of Lake MacLeod which was 6 million AUD. This investment is being paid off quite handsomely. In 1979, Dampier Salt had a net profit of 3.6 million AUD. For the year 1980, net profits increased to 11.5 million AUD.

Most of the Australian export of salt is to service the markets of Japan and South-east Asia. Distribution of DSL production in 1980 was in per cent:

Japan	81
Korea	10
Taiwan	6
Philippines and Malaysia	3. <sup>11</sup>

## AUSTRALIAN SALT INDUSTRY



Company	Location	Capacity <sup>1)</sup> ( 000 tons )
Dampier Salt Ltd	1 Dampier, WA	2 400
Leslie Salt Co	2 Lake McLeod, WA	1 000
Shark Bay Salt Pty Ltd	3 Port Hedland, WA	2 000
Lefroy Salt Pty Ltd	4 Useless Loop, WA	550
Western Australia Salt Supply	5 Lake Lefroy, WA	200
Cheetham Salt Ltd	6 Lake Deborah, WA	50
	7 Pink Lake, WA	
	8 Port Phillip Bay, Vic	150
	8 Corio Bay, Vic	
	9 Lake Tyrrel, Vic	
Waratah Gypsum Pty Ltd	10 Lake McDonnell SA	600
Broken Hill Pty Co Ltd	11 Whyalla, SA	
Australian Salt Co	12 Lake Bumbunga, SA	
Ocean Salt Co	12 Price, SA	
ICI Operations Australia Pty Ltd	12 Dry Creek, SA	600
	13 Bajool, Qld	100
Central Queensland Salt Industries Ltd	13 Bajool, Qld	50
<b>Total</b>		<b>7 700</b>

Source: *Australia's Mineral Resources: Salt*

Note: 1) Mid - 1980



Sales are mainly negotiated through subsidiaries in Japan and Hong Kong or through the Japanese trading houses which are partners in the joint venture: Marubeni, C-Itoh and Nissho-Iwai.

Because of the size of DSL, it does not see its competitors as a real threat to market position. The most serious threat, as DSL executives see it, is the Mexican operation because of their low cost structure.

The company itself is totally controlled by British and Japanese transnational capital holding the following equity in per cent:

CRA Ltd.	64.9
Marubeni Corp.	20.5
Nissho-Iwai	10.1
C-Itoh	4.5

CRA takes on responsibility for management and production and the Japanese trading companies handle much of the distribution.

• *Leslie Salt (California, USA)*, upon the invitation of the Western Australian government in 1965, began to clear land near Port Hedland for a salt field. After an expenditure of 8 million AUD preparing the field, the first harvest was cropped in 1968, and the company became the second largest salt producer in the Pilbara.

In 1978, Cargill Inc. of the USA, the world's largest agribusiness, and the largest privately owned company in America, purchased all the shares of Leslie Salt for 30 million AUD. During 1981, Cargill spent 12 million AUD on repair, renovation and expansion which makes it appear that managers of the operation are very optimistic about the future.

At present 60 per cent of its sales are to Japan and 40 per cent to the three nations of Korea, Taiwan and the Philippines. But it was reported in November, 1980 by the *Japan Salt Times* that the sales allocation of Leslie Salt may change dramatically over the next few years. It was suggested that as much as 65 per cent of Leslie's sales will be going to Third World countries in the Pacific Basin.

As Leslie Salt is a privately owned company, it does not publicize sales or profitability figures. Therefore, one can only make estimates, with very meagre data, what the position of the company has been over the past few years. We would estimate, with the present level of sales, that Leslie Salt would be earning profits in 1982 of approximately 3 million AUD, and by 1985 will be earning an annual rate of profit between 5–10 million AUD.

Very few people have heard of Cargill, Inc., the parent company, as they do not produce name brand commodities, nor operate in public stock exchanges. What they do mainly, is buy grains from farmers and sell them on world markets. Cargill ranks 18th in sales among all United States companies and is the largest single contributor to the U S balance of trade ledger. The company has 140 subsidiaries in 38 countries, has assets exceeding 3.5 billion USD, annual sales of 12 billion USD and reported profits of between 120–200 million USD annually.<sup>12</sup>

85 per cent of Cargill's stock is held by 33 members of the Cargill and MacMillan families, the rest being held by a few privileged executives. It is one of the most secretive organizations in the world. The very few details that are known about the company's operations were squeezed out by a Senate sub-committee investigating multinationals and by the U S Securities and Exchange Commission. Yet, according to Frank Church, chairman of the Senate sub-committee:

"no-one knows how they operate, what their profits are, what they pay in taxes, what effects they have on our foreign policy – or much of anything else about them."<sup>13</sup>

In fact, the questioning of Cargill officials was called off after only one day. The committee was blitized by rows of experts, and Cargill's team of 14 solicitors ready to refute every hostile reference to the firm. They turned the attack against the

committee itself and accused it of attempting to smear the grain business. Further scheduled hearing were postponed indefinitely.

It is the companies possession of global information which others do not have that defines its uniqueness, and makes it ungovernable. A great deal of this information is required to complete the jigsaw puzzle of what is really happening in the global food economy. This information is analyzed and synthesized by Cargill.

As America has become the centre of the planetary food system since World War II, Cargill has become the nucleus of this empire. It is estimated that Cargill alone controls one-third of all grain in world trade. The company is indispensable to the economic and political policy of the United States because of its control over the distribution of grain, processing plants, technology, capital, and communications with buyers and sellers of food.

• *Shark Bay Salt (SBS)* was established by Garrick Agnew Pty. and Adelaide Steamship Co. and commenced production in 1967. Major development and managerial problems plagued the company in the early years. In 1973, a re-organization took place when Mitsui Salt, subsidiary of the Mitsui Corporation of Tokyo, bought a 49 per cent share. Meanwhile J.O. Clough and Son Pty. Ltd. joined Agnew and together took the remaining 51 per cent, establishing the joint venture with Mitsui.

Total investment to date has been 12 million AUD and the company has made profits every year since 1975. Mitsui handles all of the shipping and secures contracts for the company, 70 per cent of which are to Japan. Other sales are to Malaysia, Taiwan and South Korea. The company is considered to produce the best quality salt in Australia, if not the world. Because of this, managers are quite confident of their market position.

Compared to the other operations SBS is much smaller, but has been experimenting with a number of technological innovations. These include the use of dyes to increase the evaporation rate, and laser-beam guided harvesters. Mitsui Salt is a wholly owned subsidiary of Mitsui and Co. Ltd. of Japan, a major Sogo Shosha (general trading company). Mitsui specializes in the area of raw materials, being responsible for purchasing, marketing, carrying of inventory, and market research. It has its own bank to provide financing, and industrial subsidiaries which act as the production component. It is a truly conglomerate corporation with more overseas investment, much of it in Australia, than any other Japanese corporation.<sup>14</sup>

## Summary and Conclusions

Having taken for granted a seemingly small and innocuous industry, the workers on site and the authors have been surprised, to say the least, to have uncovered yet another example of massive corporate power. In just one sector of primary commodity production — salt, with three major companies in the Pilbara, we have identified three giants of world capitalism:

Cargill, Inc., the largest privately owned company in the world, controlling a major portion of the world's food.

CRA Ltd., the largest mining transnational in Australia, subsidiary of one of the largest mining — financial houses in the world, Rio Tinto-Zinc.

Mitsui and Co., described as the largest Japanese transnational company in terms of overseas investments second only to Mitsubishi in terms of total sales.

These expanding world conglomerates are at the core of a new international order dominated by transnational capital and controlling a staggering array of commodities, of which salt is only one.

We were therefore not surprised when we discovered that Mitsubishi is the co-venturer in what is the largest salt mine in the world in Mexico. The Mexican mine

on the Baja Peninsula is known as *Exportadora de Sal, S.A.* and is jointly owned by the Mexican government — 51 per cent, and Mitsubishi — 49 per cent. This mine and the three in Australia already described export one-half of all salt moving in world trade.

Connected to this information is the awareness that salt is absolutely essential to the process of industrialization throughout the Pacific Basin. The Pacific Basin has been described as the "world's boom area" even during the recession of world capitalism in the past decade. The "newly industrializing nations" of South Korea, Taiwan, Philippines, Singapore, not to mention Japan are seen as the core of world capitalist expansion during the 1980s.

And for purposes of industrialization we have discovered that salt is crucial. Salt is used not only in the traditional areas of leather tanning, textile dyeing and soap making. It is now important in pulp and paper manufacturing as a precipitant for waterproofing compositions, metallurgy for descaling in salt baths, ceramics for vitrification of heated clays, the petroleum industry for inhibiting fermentation of starch in well-drilling mud. Finally, caustic soda is normally produced by electrolysis of salt brine. Aside from its use in alumina processing, it is an important chemical in the manufacturing of detergents, petroleum, rayon, cellophane, cleansers, textiles, pulp and paper.

Although little attention has been given to salt production, it is one of the low cost, high-profit minerals so important to the economic development of the capitalist world. This paper has attempted to present to the reader how one specific mineral is tied to the transnational control of this development process. Only when the links between the world economy and various mineral and fuel sectors are clear will we begin to see the extensive social changes that must take place for rational resource use and worker's control.

## Notes:

<sup>1</sup> *National Geographic*, Vol. 152, No. 3, September, 1977.

<sup>2</sup> A.R. Bridbury, *England and the Salt Trade in the Later Middle Ages*, Westport Connecticut: Greenwood Press, 1973, pp.xv-xviii.

<sup>3</sup> Russell Madigan, *Of Minerals and Man*, Victoria: Australasian Institute of Mining and Metallurgy, 1981, pp. 70-71.

<sup>4</sup> Roskill Information Services, *The Economics of Salt*, 1979, pp. 1-4.

<sup>5</sup> P.J. Farr, "Salt", *Mining Annual Review*, 1980, p. 120.

<sup>6</sup> United States Bureau of Mines, *Minerals Yearbook, 1978-79*, Washington: US Government Printing Office, 1980.

<sup>7</sup> The above company information can be found in two sources: J. Stopford, J. Dunning and K. Haberich, *World Directory of Multinational Enterprises*, London: Macmillan Press, 1980; and the US Bureau of Mines, *Minerals Yearbook*, Washington: US Government Printing Office, 1980.

<sup>8</sup> Allan Trengove, *Adventure in Iron: Hamersley's First Decade*, Victoria: Stockwell Press, 1976, pp. 37-38.

<sup>9</sup> Roskill Information Services, *The Economics of Salt*, 1979, p. 13.

<sup>10</sup> Basic figures were taken from the Australian Department of Trade and Resources, *Australia's Mineral Resources: Salt*, Canberra: Australian Government Publishing Service, 1980, pp. 4-5. The figures were then adjusted based on information received from the companies.

<sup>11</sup> *CRA Salt Fact Sheet*, April 1981.

<sup>12</sup> Milton Mowkowitz, Michael Katz and Robert Levering, (eds.), *Everybody's Business: An Almanac*, San Francisco: Harper and Row, 1980, p. 87.

<sup>13</sup> Dan Morgan, *Merchants of Grain*, Harmondsworth: Penguin Books, 1980, p. 16.

<sup>14</sup> See the two excellent articles on Japanese trading companies: Frederick Clairmonte, *The Expansion of Japanese Sogo Shoshas*, and Tsuchiya Takeo, Mitsui and Co. *Raw Materials Report*, Vol. 1, No. 1, October, 1981, pp. 16-35. ■