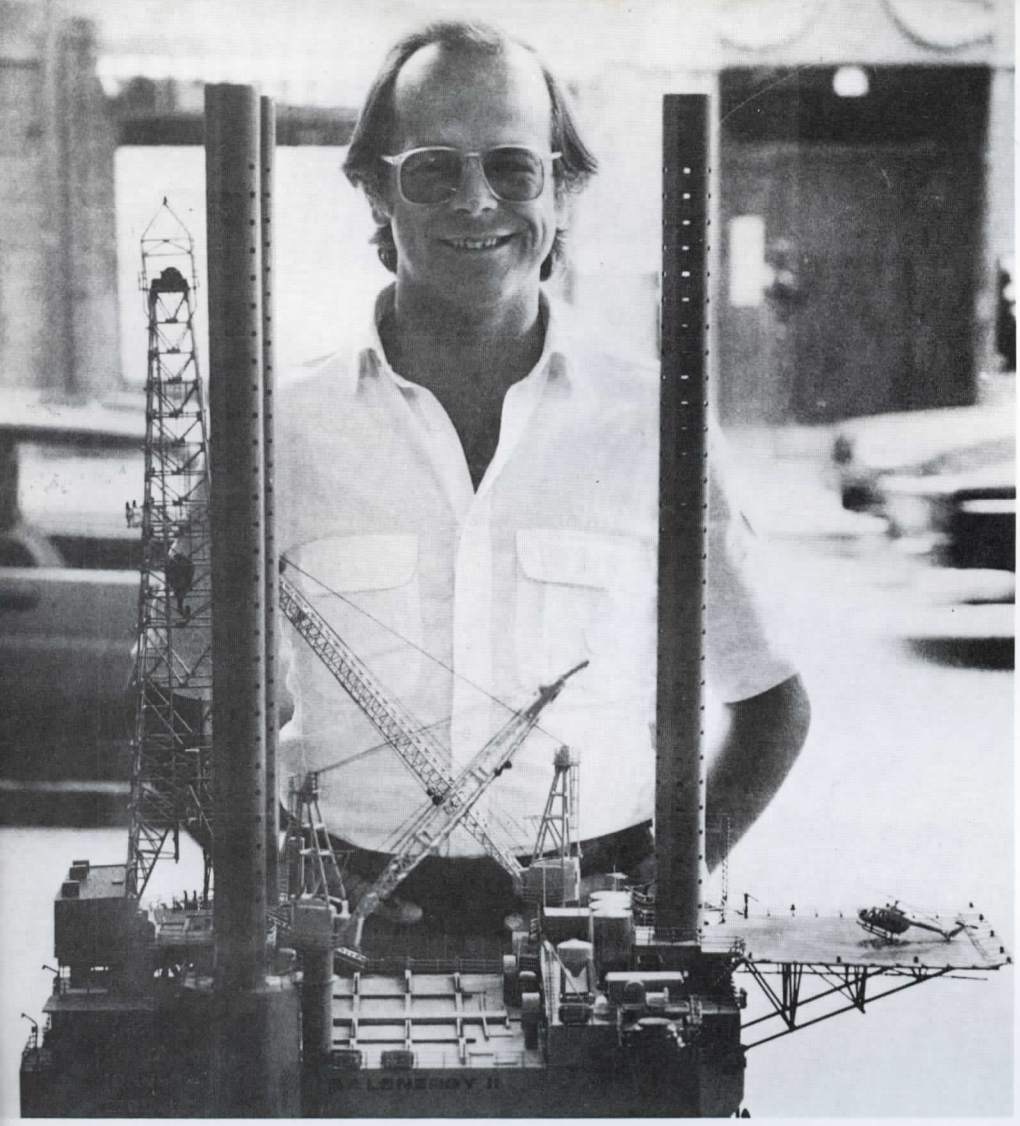
Salén-Nytt

4/84 SPECIAL NUMBER



Henric Ankarcrona,

'Reduce d fluctuation

"By expanding in the trading sector, we wish to reduce Salén Energy's dependence on cyclical market fluctuations," says Henric Ankarcrona, Salén Energy's president.

The company's investment in offshore services through SOMUS in Aberdeen is another way of spreading the risks by proceeding further along the oil industry's long production chain.

"We wished to spread the risks by moving further along the production chain, to get away from the early stage of exploration and drilling, which is risky and in which market fluctuations are the worst," says Henric Ankarcrona, president.
Photo: Ragnhild Haarstad

Salén-Nytt's most recent special feature issue, "Focus on Salén Energy," was published less than two years ago. In that issue, Mr. Ankarcrona gave an account of the company's plans to continue expanding in the trading sector. Salén Coal had just become a member of the Salén family. The next step was to be offshore services.

Plans fulfilled in 1983

Those plans have been fulfilled. Salén Energy has followed its charted course despite the fact that, during this period, the rig market has been worse than ever in its brief history. Or, perhaps, that provided just the push the company needed. It was becoming increasingly clear that risks had to be spread.

There were two considerations which guided Salén Energy in its choice of path.

"In part, we wished to move further along the production chain, to get away from the early stage of exploration and drilling, which is risky and in which market fluctuations are the worst," Mr. Ankarcrona states. "Even if the oil industry were to cease expanding, existing installations will need servicing and maintenance for a long time to come."

Investment in trading

"The second consideration was not only to lessen our dependence on the ups and downs of oil production but also on market conditions," Mr. Ankarcrona continues. "The entire oil industry is highly dependent on the state of the market. To avoid following an up-and-down course, we've expanded our trading operations in coal (**Salén Coal** and **Salén Resources**) and oil (**Salén Oil**). The coal company is the oldest and has already proved profitable—a skillful performance in today's difficult coal market."

There is a natural base within the Salén Group for coal and oil operations. Salén Dry Cargo knows most about shipping coal, and Siwertell about continuous unloading. Salén Tanker knows about shipping oil, and the Salén fleet is a large end-user of bunker oil. Moreover, the bunker price is of decisive importance for the total cost situation. Accordingly, the quality of the purchasing service should be as high as possible. If it is sufficiently high—which it is at Salén Oil—there is a greater chance of selling the service to others. This is already taking place today.

Henric Ankarcrona also reveals that the number of Salén trading companies will soon be increased by one, in which Salén Energy will hold a minority interest with Argonaut, Transatlantic and some Ameri-

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Cover

American roughnecks on board one of Salén Energy's rigs in the Gulf of Mexico. The work is tough, dirty and dangerous. Hence Salén places great emphasis on safety. The success of these safety efforts has been recognized by a number of awards. See page 10 for more about safety work on board.

This entire issue is devoted to Salén's various activities in the energy sector.

This is a special issue, not dealing with other aspects of the Salén Group's operations. The next regular issue will be published at the end of October.

Photo: Per-Olow

Omslag

Amerikanska "roughnecks" fotograferade ombord på en av Salén Energys riggar i Mexikanska Golfen. Tufft, smutsigt och farligt arbete. Därför satsar Saléns hårt på säkerheten och har också fått ett flertal utmärkelser, som bekräftar att den satsningen givit resultat. Läs mera om just säkerhetsarbetet ombord på sid 10.

Hela detta nummer innehåller läsning om Saléns många olika verksamheter inom energisektorn.

Det är en specialutgåva som saknar annan information om salénkoncernen. Nästa ordinarie nummer utkommer i slutet av oktober.

Foto: Per-Olow

ɔresident, Salén Energy:

ependence on cyclical market s and spread the risks'

can partners. The new company, whose name has not yet been decided, will handle oil products. The management will be American and the company will have offices in New York and London.

"In Sweden, not enough is known about such general trading, and we have to be close to key markets. So we had to go outside Sweden for the company management and specialist skills."

Otherwise, Mr. Ankarcrona underlines that Salén Energy has aimed at procuring know-how first and then building on it. But, at times, this knowledge needs to be supplemented for operations on an international scale.

Aiming at the North Sea

Several new companies were added to the Salén Energy family in 1983. **SOMUS** (Aberdeen) and **Salén Offshore Services U.K.** (London) were established, in addition to Salén Oil (Stockholm) and Salén Resources (New York). SOMUS belongs to the service category. They are still small companies, but with big ideas. When realized, these ideas will earn money at the end of the production chain. They will also prepare the way for the expansion of Salén Energy's North Sea operations.

"We had decided not to start any new branches of activity during 1984," recounts Mr. Ankarcrona. "But **Largus Exploration AB,** established this year, is a different case. This company doesn't really cover any new activity. It's an exploration company. Together with Salénia, we made a private placement in the capital market. We excluded the general public on account of the high risk involved."

Largus is participating in all of Salén Energy's present exploration projects. When they have been completed, the company will still have a good part of its capital left and thereby the chance to shape its own policy.

Old company with a new name

On paper, **Salén Offshore Company** in Houston is also a new company. But, on the whole, it has the same staff and the same organization as Salén Protexa.

As early as 1983, notice was given that cooperation with Protexa would end. This cooperation lasted three years as planned. Henric Ankarcrona makes two reflections.

"The basis of all forms of cooperation must be a good mix of personalities as well as a good understanding of one another's cultures. Accordingly, working in Texas with a Mexican partner is difficult. And in any form of cooperation there must be some sort of balance between the contributions made by the parties involved. That balance wasn't evident in this case. Nor was it generated. Now, we're continuing independently as drilling contractors in the Gulf of Mexico, with Houston as our base."

In the Gulf, Salén Energy will closely follow the trend towards drilling at increasing depths. Recently, one of the greatest finds was made in the Gulf at 1,400 feet and this will provide a basis for new drilling technology.

A year of transition

Unfortunately, Salén Energy's profitability as a group will be nothing to boast about in 1984. The company's aim was to break even this year, but this will be impossible on account of the drilling project in Turkey, far too big for Salén Energy, although not for the entire Salén Group. The project cost about SEK 19 million. But this year's boreholes in the Philippines showed large indications of gas and there is nothing to rule out that the formation also contains oil. Further appraisal, possibly followed by drilling, will tell.

Another setback was that Salén Energy's involvement in Hamilton Brothers' exploration program in the United States did not yield the desired returns. The program has not been very successful to date and the timetable has been extended.

"Moreover, despite long-term favorable contracts, which saw us through when the drilling market was at its lowest, we will feel the impact of the slump this year," Mr. Ankarcrona states. "But we should bear in mind that Salén Energy is the unit within the Group which, in absolute figures, has earned the most money in recent years. This was a result of wise decisions made in 1980 and 1981."

Mr. Ankarcrona looks upon 1984 as a year of transition. He bows to the inevitability of some good years being succeeded by one bad year. But this does not change his optimistic view of the future and of Salén Energy's intentions of laying a good base for continuing profitable operation.

Smaller shares, smaller risks

In Mr. Ankarcrona's perception of the future, seen against the backdrop of the past, there will be smaller shares in boreholes as far as Salén Energy is concerned. With smaller shares, the chance of making really big money—the magnet which attracts investments in the oil business—is reduced. No other venture offers so much in return for so modest an outlay.

An improved rig market, an upturn for

oil trading and profitability for SOMUS in Aberdeen ought to give at least a break-even result in 1985, Mr. Ankarcrona believes.

The program which will prepare the way for a better 1985 and a still better 1986 also incorporates plans for a new jack-up rig for the North Sea market.

"Discussions are being held at present with a Far Eastern shipyard," Mr. Ankarcrona relates. "We believe that the market evaluation and the equipment are right and that the project is timely, but before we step in we must find other partners. And this should be done preferably before October 1 so that we get delivery at the right time. We would like to keep our share at about 10 percent to show our partners that we believe in the project and to emphasize our rig management role."

Partners are an asset

Here, once again, we meet Salén Energy's philosophy that one should not be a slave to market fluctuations. Among the Salén companies, Salén Energy has been exemplary in admitting partners to major projects.

"Our own ideas and a little of our own money combined with others' money can lead to attractive deals. We have many good partners, whom we value highly," Mr. Ankarcrona states.

It is intrinsically good practice to have partners since they can provide access to knowledge and markets that would otherwise be out of reach. Besides, this is the practice in the oil industry in view of the large amounts of money at stake and the risks involved.

Synergy 1 + 1 > 2

Today's Salén Energy represents the entire production chain—exploration, drilling, service and maintenance, and trad-

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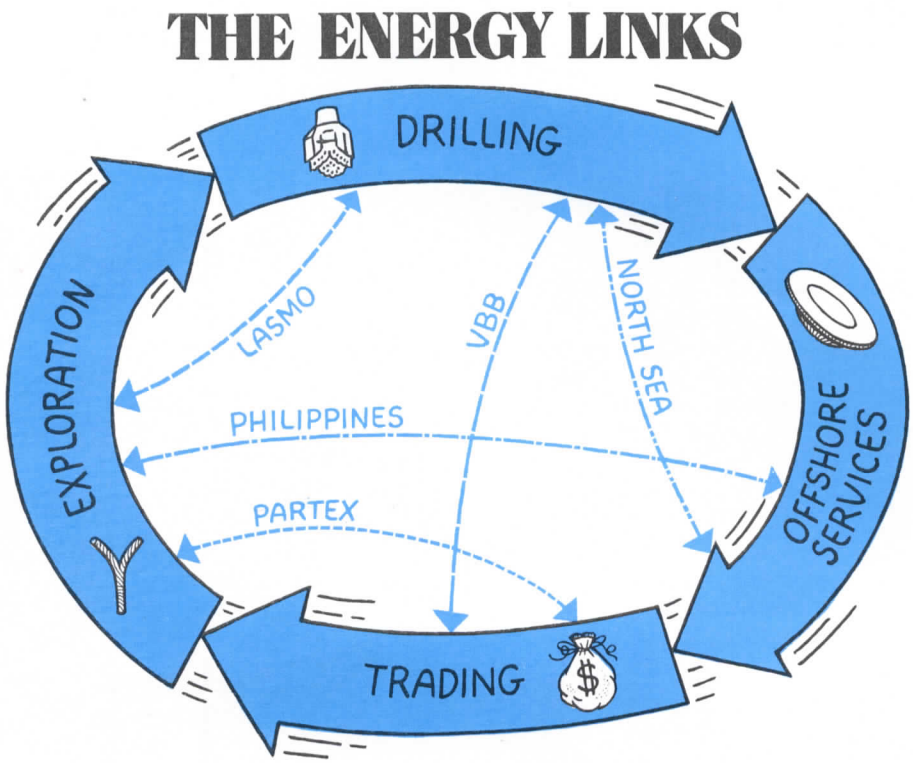


We would like, with the aid of this illustration, to show how one operation within Salén Energy links up with the next, or how other forms of cooperation arise. Synergistic effects, expressed mathematically as 1 + 1>2, are attained.

Thus, the VBB Consulting Group, a part owner of the Salenergy V drilling rig, could also be an attractive partner for Salén Coal, with VBB assisting in financing and technical know-how and the coal company supplying coal to a new plant owned by a power consumer. Partex, in Lisbon, which is assisting in exploration in Portugal, could also be an attractive partner in trade cooperation in countries with which Portugal traditionally has good connections. The link between exploration and service also becomes clear. Certain studies in the Philippine project have been carried out by SOMUS. On the whole, there are links, or openings for cooperation, between most operations.

Illustration: Olle Snismarck

ing. This not only spreads the risks, as already pointed out, but also gives synergistic effects (the greater cooperative action of several agents, compared with the sum of their individual effects, or mathematically, 1 + 1 > 2). The adjoining figure, "The energy links," attempts to illustrate this.

The knowledge accumulated by Salén Energy's various companies and its partners leads in a natural way to spin-off projects or new forms of cooperation. Thus, the VBB Consulting Group, a joint owner of the *Salenergy V* drilling rig, could also be an attractive partner for Salén Coal, with VBB assisting in financing and technical know-how and the coal company supplying coal to a new plant owned by a power consumer. Partex, in Lisbon, which is assisting in exploration in Portugal, could also be an attractive partner in trade cooperation in countries with which Portugal traditionally has good connections.

The connection between exploration and service also becomes clear. Certain studies in the Philippine project have been carried out by SOMUS. On the whole there are links, or openings for cooperation, between most operations.

Possible alternatives

Salén Energy, a well-integrated company which grew very rapidly along planned lines, might give the impression that the current solution was obvious. But there were possible alternatives.

"We naturally reflected quite a lot before we arrived where we are today," Mr. Ankarcrona states. "One possible alternative was to develop the existing operations, spread the risks among them and deepen the company's involvement. But we still made the assessment that our two original branches of activity—exploration and rigs—were subject to so many fluctuations that the company would attain a better balance through some diversification."

People—the most important investment

One resource is perhaps overlooked in the case of companies within the oil industry, in which investments of tens or hundreds of million dollars are involved. That resource is people, their know-how and, not least, their intrinsic qualities.

"To say that people are the key to everything is perhaps a truism," Mr. Ankarcrona says, "but I would still like to reaffirm it. I think that many of those working today within Salén Energy's various operations in Sweden and in other countries not only possess unique knowledge but also, through their different personalities, creatively assist in the company's growth.

"The right person can learn anything. But judgment, the capacity to cooperate, and human warmth are not easily learned. They are intrinsic qualities."

Swedish quality

In Sweden we may live in the belief that Swedish products sell on the strength of their quality. But an American investigation recently showed that, at least in the U.S. market, people do not automatically link Swedish products or services with the concept of quality.

But there is much evidence showing that the services of Salén Energy, as a Swedish drilling contractor, are considered by customers and public authorities to be of exceptionally high quality. A long series of safety awards attest to this. Another illustration is the winning of the highest day rate by *Salenergy V* among the rigs on long-term contracts extended by ARCO.

"Salén Energy is the only Swedish company which operates drilling rigs offshore, as well as the sole Swedish operator in offshore exploration," Mr. Ankarcrona points out.

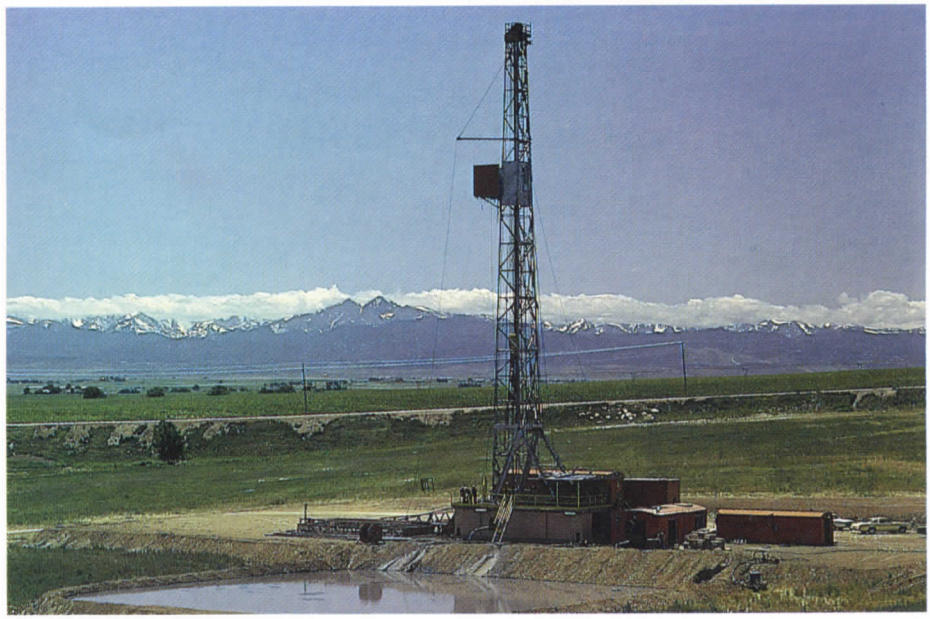
Naturally, there are advantages and disadvantages in venturing into the oil market with a relatively small company based in a country which lacks traditions in the oil business.

Own tradition

"One advantage is that we can never be suspected of having secondary political motives in our undertakings. This has probably favored us in Portugal, Turkey and the Philippines. Of course, the lack of tradition is a disdavantage, but we're in the process of shaping one. Salén Energy is now backed by a well-deserved tradition of 10 years' standing. And that is a good basis for future operations," Mr. Ankarcrona concludes.

Margareta Dahlstedt

Searching for energy



It is possible to concentrate on onshore prospects, where the costs may be lower than offshore. *Photo: Per-Olow*

Background

Large, diversified operation. The oil industry is the largest commercial operation in the world. Measure its production in terms of weight, volume or value the result is invariably higher than the comparable figure for any other industry. Total world oil production in 1983 was 2.75 billion tonnes, or 56.4 million barrels a day; at an average value of $28 a barrel, this was equal to $575 billion. If production of natural gas, equivalent in energy content to 1.35 billion tonnes of oil, is included, total petroleum production in 1983 was 4.1 billion tonnes.

The maintenance of recoverable reserves at a reasonable level, thus guaranteeing the future supply of oil and gas, requires that production be replaced by new discoveries each year. Finding oil to "top up" world reserves is the aim of the oil exploration carried on worldwide by companies of all types. These range from giant multinationals to one-man operations, with single wells producing a few barrels a day.

In such a large industry, exploration projects vary enormously in acreage, drilling costs and production potential. Drilling costs for a shallow onshore well in a favorable location may be about $100,000. The most expensive well to date—Mukluk, off Alaska's coast—was drilled last year at a cost of $120 million. It was found to be dry. Many shallow onshore wells produce only two to three barrels a day. The Ixtoc well, in the Gulf of Mexico, probably holds the record for high flow. Unfortunately, following a blowout, this well lost 30,000 barrels of oil a day in spite of intensive efforts to cap it.

Many kinds of support services are supplied to oil companies by drilling contractors, seismic contractors, logging companies, cement companies, and by consultants who specialize in such fields as geology, geophysics, mud logging, drilling supervision, and log analysis.

Depletion of a finite resource. Ultimate reserves of oil and gas are limited. New sedimentary formations are being generated continuously and the processes which have formed oil and gas still operate, but on a geological time scale. Fresh deposits of oil and gas are being formed, but not as fast as these products are being consumed. In practical terms, therefore, oil and gas production is tantamount to depletion of a finite resource. Large areas of the world which are still virtually unexplored probably contain large quantities. Up to now, it has been possible to replace oil and gas consumed by making new discoveries. The date when this will no longer be possible is still beyond the foreseeable future.

Exploration for oil and gas is an international activity. Although it is possible to find locations where substantial discoveries can be made, it is impossible to find any untouched locations, where no one has tried earlier by shooting seismic or drilling a well. The sedimentary basins of the world have been cataloged and described and are studied by oil companies which hope to make discoveries that have eluded earlier prospectors. Advances in supporting technology, especially the computerized processing of seismic data, have enabled geophysicists to reveal information about the geology of deeper formations that was not available before.

Exploration is an exciting activity. The aim is to make major commercial discoveries, which may change the trend of exploration in a country and permit a company to expand. The hope is, that after many years of failure, the start of production will cause a sudden rise in income. But revenues from a new oil field do not last forever. Reinvesting income in other profitable exploration ventures to generate fresh income is a necessary task.

Salén Energy maintains contacts with major and minor oil companies, collects and digests information, and tries to develop prospects at a moderate cost in anticipation of commercial discoveries, which hopefully will materialize in the not too distant future.

Salén Energy's exploration activity

In oil and gas exploration, many strategies are possible. Each company has to pick the one which suits its aims and resources. It is possible to opt for small leases, blocks or concessions, where the risks may be limited but where the small area rules out big discoveries. It is possible to concentrate on onshore prospects, where the costs may be lower than offshore. But exploration is not a safe investment anywhere. Large sums of money can be lost on onshore wells, no matter how promising the prospects may have seemed.

Up to now, Salén Energy has concentrated mainly on offshore operations. There is a greater chance of a major discovery in this sector. Offshore exploration is a much more recent activity, compared with onshore exploration, and prospects may have been overlooked. Initially, offshore exploration is easier, since seismic surveys are easier to perform. A vessel carrying seismic equipment is generally free to proceed in any direction. Obstructions onshore—buildings, mountains, lakes, etc.—restrict the shooting of seismic and increase costs.

It is possible to make a preliminary seismic survey offshore, map some promising structures, and show that a proposed contract area is more promising than previously thought. Other companies may then be induced to join the project on more favorable terms than would initially have been feasible.

The best exploration contract terms can often be negotiated in an area with unknown potential, where a country is anxious to attract foreign companies. Producer countries, in which the geology has been well studied, can offer less favorable terms. They know that the bidding companies will compete strongly for the available contracts.

In unexplored areas, a great deal of time has to be spent in learning how the area

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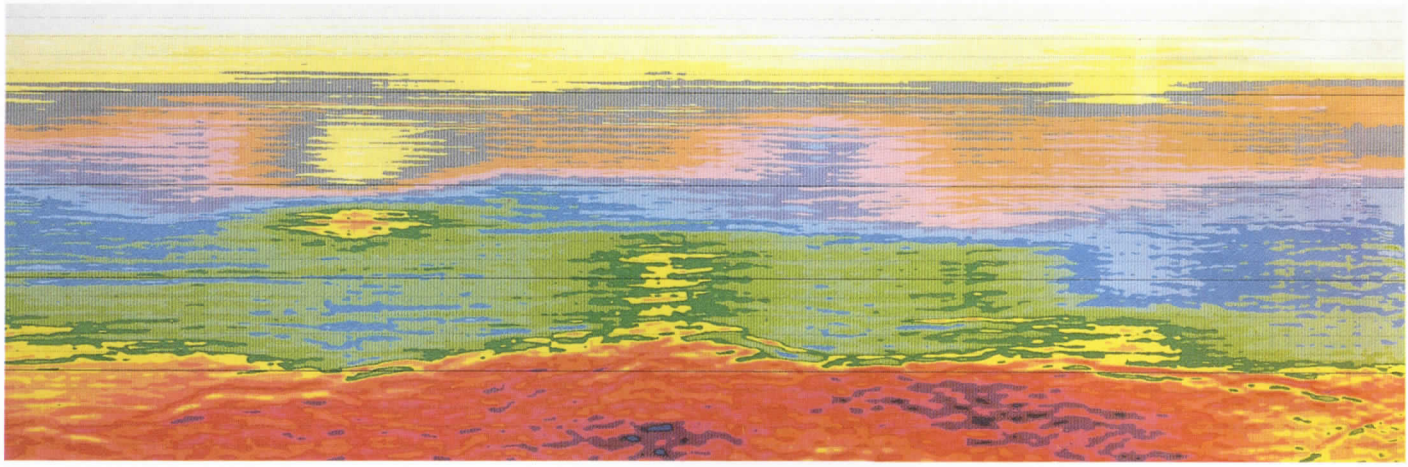

Guy C. de Caprona, *geology and geophysics. "The above figure is a seismic section from our acreage offshore Turkey. The color display makes it similar to a geological cross section through the Earth. It stretches 14 kilometers east to west and some 4,500 meter vertically. The white upper portion denotes sea water; light yellow, soft sea-bottom sediments; gray and green sands and clays; yellow, limestone beds; and red, volcanic rocks."*

evolved over millions of years: how the source rock, the reservoir and cap rock originated, how the area submerged into—or emerged from—the sea, the course the mineral followed before being deposited as a reservoir, etc. Such data indicate where good prospects are likely to be found. Preliminary conclusions are generally incomplete and need to be amended when well data becomes available. After some years, an explanation fitting all the available data will have been developed and the chances of exploring successfully will have increased substantially. Delays and revised conclusions are the price which must be paid for a major discovery.

Salén Energy has generally selected large unexplored areas where, if its evaluations are correct, large oil or gas fields may exist and where, in view of difficult conditions, the contract or concession terms are reasonably good.

Reed Bank, Philippines

Salén Energy has been active for eight years in the Philippines, mostly as an operator. The contract covers 1,875,000 acres (7,500 square kilometers). Several wells have been drilled and gas and condensate have been tested.

Two banks with a water depth of 130 to 250 feet (40 to 80 meters) are involved. The present aim of exploration is to find sandstone thick and porous enough to contain commercial quantities of oil or gas. The south bank includes a very large structure of more than 130,000 acres (500 square kilometers) under closure; within it, two wells have tested about 3.5 million cubic feet (100,000 cubic meters) per day. In some other location this would have been a good discovery, but on Reed Bank larger quantities are needed if the discovery is to be commercially viable. Thick sands are present in the wells we have drilled. These sands, showing hydrocarbon indications, may contain enormous quantities of natural gas and condensate (hydrocarbons which are gaseous in the reservoir but liquid at normal temperature).

Up to now, Salén Energy has concentrated on the south bank, where hydrocarbons have been discovered. Certain structures in the main bank could well be drillable, however, and may contain oil.

The Reed Bank discovery has yielded only natural gas and some condensate. If we were to discover oil underneath the gas, the oil could be produced from a platform on the bank. If we discover only gas and condensate, and can confirm that large quantities are present, it will be possible to produce only condensate from a platform on the bank and recirculate gas into the formation to maintain the pressure in the reservoir.

Ammonia and methanol can both be produced from natural gas. Production on the bank would probably be economically feasible if prices remained stable. Ammonia could satisfy the Philippines' need for nitrogen fertilizers. There would be a large market for methanol if it were decided to use it as a gasoline additive. The reserves necessary to sustain such production are within the range we expect to find.

Even larger quantities—still within the limits of the possible reserves—are needed to liquefy natural gas, which would probably be sold to the Japanese market. Exploiting such reserves would require huge investments.

In the next few months, some of the existing seismic data on the south bank and the main bank will be reprocessed by computer to extract more information. The result may lead to a decision to shoot additional seismic, or to drill another well.

Turkey

The Salén contract area is in the northeastern corner of the Mediterranean. Since 1979, Salén Energy has explored the area under the terms of a contract with the Turkish National Oil Company.

The basic hypothesis is that the oil-producing limestone in many countries in the Middle East extends into this area and can be discovered, but that it is covered by ophiolite, a rock formation of volcanic origin. The limestone is known to exist in eastern Turkey, where some oil is produced from it. Onshore, it is fractured, however, so that only small fields have been found. Offshore, there seem to be larger structures. With the excellent sealing properties of the ophiolite, any oil once contained in the limestone should still be present. The limestone over the entire Middle East was formed at the same time, under the same conditions. Accordingly, the chances are good that it also contains oil in Salén Energy's contract area. The conditions in this area are probably similar to those at the other end of the Arabian platform, the coast of Oman, where the limestone is also covered by formations similar to ophiolite.

The Birten well was drilled in the spring of 1984 on the basis of an interpretation that the top of the ophiolite was about 5,000 feet below sea level, and the top of the limestone about 11,000 feet. The first analysis proved to be correct. Measurements from the bottom of the well indicated, however, that the reflector at about 11,000 feet was not limestone but another pack of ophiolite. The top of the limestone thus had to be located at a depth of 17,000 feet. Since this was too deep to be reached by the current drilling program, the Birten well had to be abandoned.

The Birten well taught us how difficult it is to drill ophiolite. Owing to the hardness of the material, the penetration rate gradually became too low. A number of different bits were tried in an effort to find the type best suited to drill this formation.

The information gained from the Birten well, mainly on sound velocities, will now be used for reprocessing seismic lines over the large Ayse structure in the southern part of the contract area. The form of this structure is simpler. It seems to be dome-shaped, while the Birten structure is more complicated. The top of the limestone is also expected to be slightly higher, at about 15,000 feet.

A program for drilling down to 15,000 feet, through 10,000 feet of ophiolite, will now be prepared. This program will utilize the experience gained from Birten with respect to selection of bits, mud and casing programs, etc. The well program will

then be used to estimate the drilling cost, which will run to several million dollars.

Even such a large amount will seem insignificant if, at a depth of 15,000 feet, there is a billion-barrel field.

Portugal

The Portuguese project is the most recent. Salén Energy, together with Salénia and Neste, the Finnish oil company, signed a contract in September 1982 in respect of 2,000 square kilometers covering the northern part of the Portuguese continental shelf.

Only seismic work, mainly reprocessing of existing data, has been performed to date. The same area was under contract to Texaco in the mid-1970s, but the Americans had difficulty in interpreting its seismic sections and abandoned it. With modern computers it is now possible to process the data more satisfactorily and to obtain seismic sections which can be interpreted. We have also shot a seismic program over those areas shown by the interpretation to be of special interest.

As a result, we now have one well-defined structure of 150 square kilometers, where we can select a drilling location, and two smaller structures. The latter

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Offshore oil production

	Total Production Million tonnes	Offshore Production Million tonnes	Offshore Share of Production Percent
1979	3,220	650	20.2
1980	3,080	705	22.9
1981	2,890	710	24.5
1982	2,780	700	25.2
1983	2,755	730	26.6
(1984[1])	2,760	760	27.7)

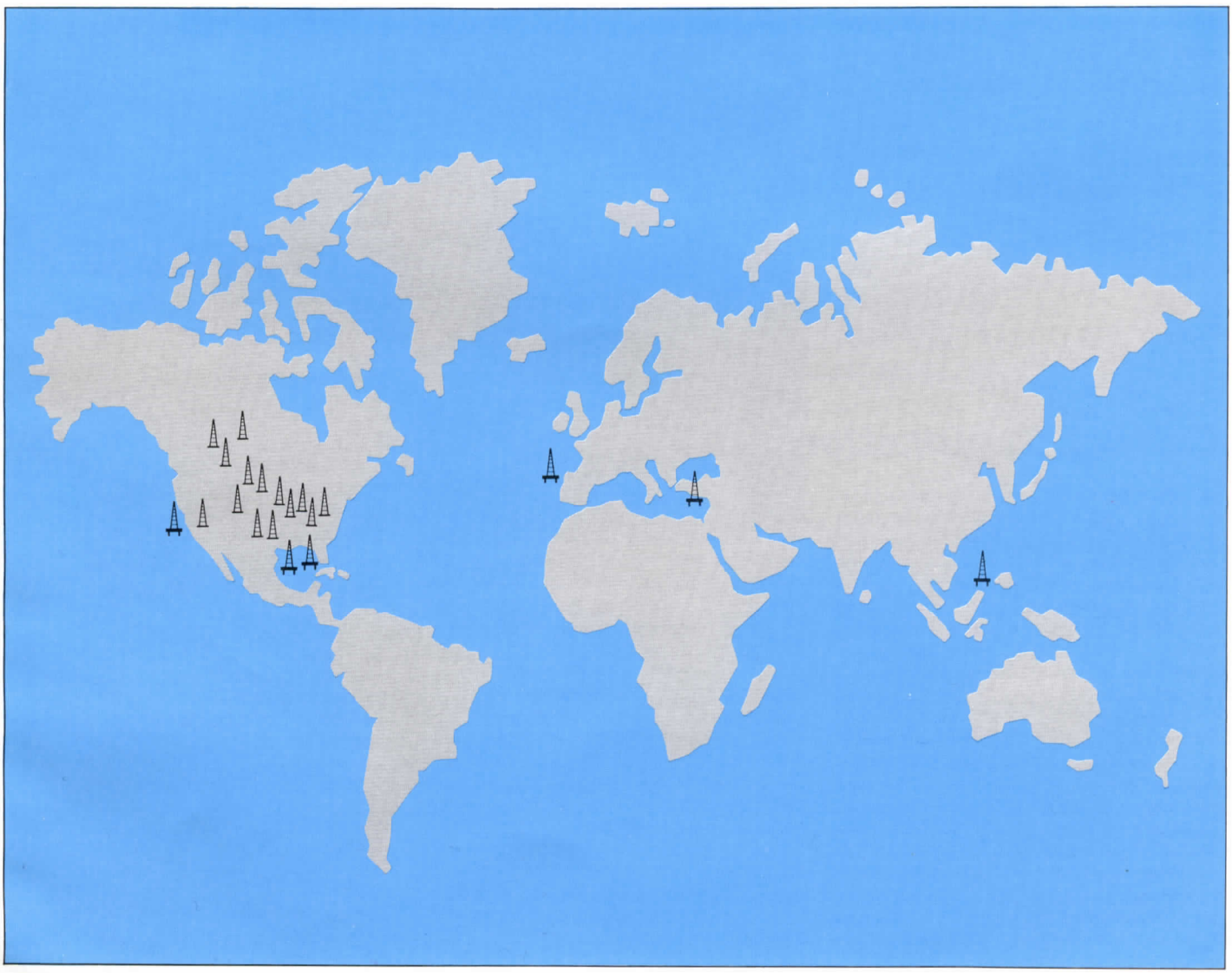
[1] Half year figures extrapolated into the full year

Offshore exploration is a much more recent activity, compared with onshore exploration, and prospects may have been overlooked. Accordingly, there is a greater chance of a major discovery in this sector.

Salén Energy's exploration acreage

	Total acreage sq. km	acres	Salén Energy's share acres
Reed Bank	7,500	1,870,000	201,000
Gulf of Iskenderun	3,400	800,000	480,000
Portugal	2,552	638,000	269,000
Total			950,000

The map indicates areas around the world in which Salén Energy is involved in exploration projects.



Searching for energy ...

"The oil industry is the largest commercial operation in the world," says Lennart Båveryd, executive vice president, primarily responsible for Salén Energy's exploration projects.

will be explored later but can probably also be developed into drillable structures. There are other leads which might be developed into drillable structures.

The main structure appears to have all the ingredients necessary for an oil discovery. It contains suitable reservoir rocks and possibly an overlying reef. (Opinions are divided on the existence of the latter.) Source rocks should be present both in the deep formation oceanwards and in a trough on the shore side.

The present contract applies only to a water depth of 200 meters. The area "outside" is governed by separate Portuguese legislation and has to be covered by another contract. Since the main structure extends into deeper water, the terms of a contract covering the deep-water area adjacent to our present contract area have been agreed with the Portuguese authorities and the contract will be signed shortly.

We are now in the first two-year period of the contract which should be used for a seismic study of the area. In early September we have to notify the authorities whether we wish to relinquish the contract or extend it for one year. If we opt for the latter, we also assume an obligation to drill one well during that period.

Hamilton Brothers

To balance the long-term investment in offshore exploration which may yield big profits after many years of effort, Salén Energy is also participating in a different type of program, designed to provide a safer but lower return on investment. This comprises the Hamilton Brothers' exploration programs for 1982 and 1983.

Hamilton Brothers is a medium-size independent U.S. oil company, based in Denver, Colorado. The company has grown rapidly under the management of the two brothers, Fred and Ferris Hamilton. They have now sold the greater part of their interest in the company to Volvo, currently the largest owner. The Group was reorganized in connection with this transaction and is now called Hamilton Oil.

During its expansion period, Hamilton Brothers raised capital for its exploration activity by organizing joint ventures with outside investors. The latter contributed to exploration costs in return for a share in the discoveries proportional to their contributions.

Through its contribution to these programs, Salén Energy has acquired a small stake in a large number of prospects. Most of these are located onshore, which means that the time from discovery to the start of production is reduced. Since well costs are lower onshore, a spread of risks is attained by participation in a larger number of wells.

So far, Salén Energy has participated in about 40 wells in the 1982 program and in 20 wells in the 1983 program. Approximately one third of these participations have been successful. Salén Energy now has a stake in a number of oil wells in Canada and in gas discoveries in Texas and Oklahoma. Oil and gas production has now commenced and will generate income in future years. No major discovery has yet been made in either program and the ultimate financial results of the investments are uncertain.

Salén Energy's participation in Hamilton Brothers' programs started at about the time that an oversupply of natural gas developed in the U.S. and the market for expensive deep gas disappeared. Many prospects, previously rated highly, had to be reevaluated. This also affected Hamilton, since previously acquired prospects had to be reappraised—many of them are currently not suitable for drilling—and production from gas discoveries had to be reduced.

The oversupply of gas is now diminishing and may disappear in 1985. Gas production will probably have increased by this time and more discoveries will have been made. Hopefully, we will then begin to receive a return which will continue for several years.

Other areas

Salén Energy is studying a number of other areas in Europe, Africa and Central America, where conditions may be suitable to start exploration. We intend to find at least one other area where we can enter into an exploration contract. But no area satisfying all the criteria has been found to date and no negotiations are in progress.

Salén Energy will probably also invest in another onshore project concentrated to a limited area but selected on the basis of the criteria which led us to invest in Hamilton's programs.

Lennart Båveryd

Largus Exploration AB

To be able to continue its exploration program, Salén Energy needs to raise investment capital for its projects. One possibility has been to use the Swedish capital market, which, up to now, has not offered opportunities for participating in exploration. In the late autumn of 1983, shares in an exploration company, Largus Exploration AB, were offered privately to a number of Swedish investors.

Largus' share capital is SEK 10 million, divided into 1,000 shares, with a price of SEK 60,000 per share. The company's total capital is thus SEK 60 m. Largus was originally established to participate in Salén Energy's exploration projects in the Philippines, Turkey and Portugal, and in Hamilton Brothers' exploration program. Except for the terms of these participations, which were agreed in advance, no other plans have been made and Largus will act independently.

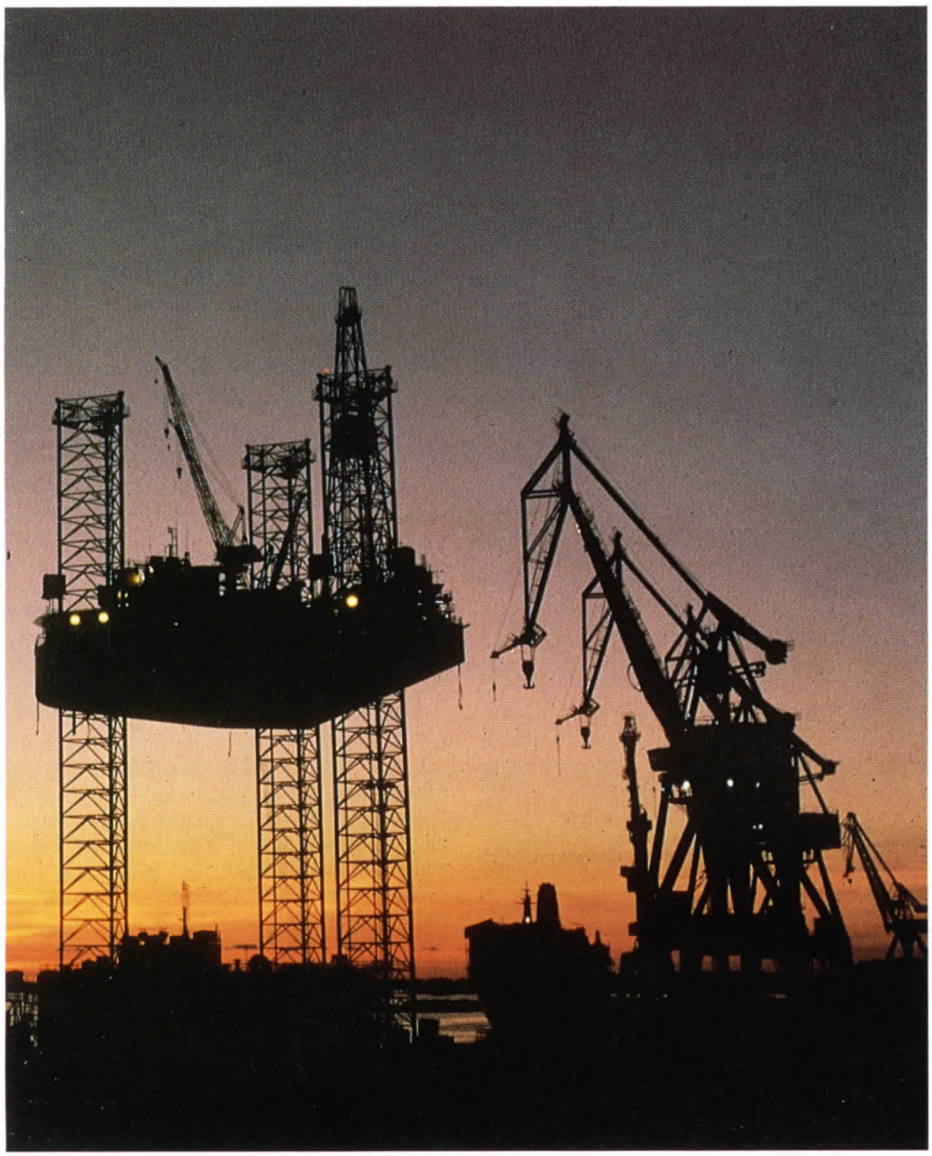
The share capital was fully subscribed and the company was formed in February 1984. The major shareholders include pension funds, insurance companies and a large number of individuals. Salén companies hold 10 percent of the shares and are represented on the Board of Directors. But, as noted, with the majority of shareholders and directors from outside the Salén Group, Largus is, and will act as, an independent company.

Participating in the initial projects under the terms of the original agreement with Salén Energy will consume about half of the original capital. The rest will be spent on other exploration projects, possibly in cooperation with Salén Energy. Up to now Largus' main activity has been to organize participation in Salén Energy's projects but the company will henceforth have an opportunity to plan other projects.

Torsten Frisk, President of Largus Exploration AB

Salén Offshore Company, Houston

Drillers with great potential



The Salenergy V jack-up rig drilling in the Gulf of Mexico.

Salén rig fleet

Salén Energy has an interest in the following rigs:

Name	Built	Type	Location
Salenergy I	1976	Bethlehem jack-up, slot type, WD 250 ft	U.S. Gulf
Salenergy III	1979	Self-contained platform rig	U.S. Gulf
Salenergy V	1980	Friede & Goldman jack-up, cantilever type, WD 250 ft	U.S. Gulf
Salenergy VI	1981	Friede & Goldman jack-up, cantilever type, WD 250 ft	U.S. Gulf
Dyvi Omega	1983	Bingo 3000, semisubmersible	North Sea

Salenergy II was destroyed in 1979 by a blowout. Nobody was injured.
Salenergy IV was sold in 1981.

Background

Salén has been engaged in offshore drilling since 1976. During this short period, Salén Offshore—a wholly owned subsidiary of Salén Energy—has made substantial advances, and gained valuable experience, in the personnel, safety, equipment and other sectors.

Being a member of the diversified Salén Group gives the company many advantages. The worldwide network of Salén offices provides a constant flow of accurate market information for virtually all areas of the world. We can present cost estimates for new markets speedily in response to customers' inquiries and in relation to our own internal operations.

Operations and fleet capability

As an offshore drilling contractor, Salén has managed six jack-up rigs and one platform rig.

Salén Energy's rigs have operated extensively offshore in the U.S. Gulf, Eastern Canada and, for three years, in Brazil. Salén Offshore's competent staff of professionals with worldwide experience provides us the know-how required to operate in almost any marine environment in which offshore oil fields are located. Our client list has grown steadily through the years to include such companies as Exxon, Mobil, ARCO, Amoco, Transco, Conoco and many others.

Salén Offshore's reputation as a safe, efficient and well-managed company, which often precedes us into oil companies' offices, is a great asset.

To provide the best possible service to our clients, Salén Energy's fleet of modern rigs is equipped with state-of-the-art equipment. Through a comprehensive ongoing maintenance program, we are able to anticipate the many potential problems and hazards that can plague a company in the drilling industry.

Safety, personnel and training

Salén Offshore has attained very high personnel and safety standards. Personnel turnover has been maintained at a very low level, resulting in crews who are well experienced in all aspects of rig operation and maintenance. Through selective recruiting and comprehensive employee training at various schools, as well as on site, Salén management continually

Cont. on page 10

Drillers with ...

stresses its commitment to efficient, safe operating procedures and applications.

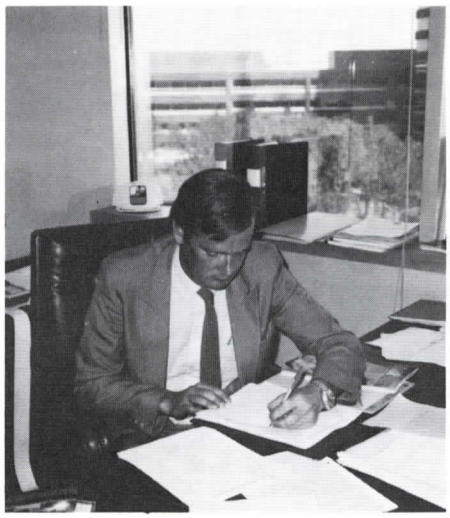
Our safety record is outstanding. Salén Offshore has won numerous safety awards from operators and the International Association of Drilling Contractors (IADC). Such recognition testifies to our pledge to keep our crews safe and well in this highly hazardous occupation.

Various programs, such as our Executive Awareness Committees, Quarterly Tool Pusher Meetings and a comprehensive Safety Award Program, have helped to weld a strong bond between the management and rig personnel. Such activities promote the sense of pride which all of us at Salén have in our personnel, equipment, accomplishments and ability, so important in the drilling industry today.

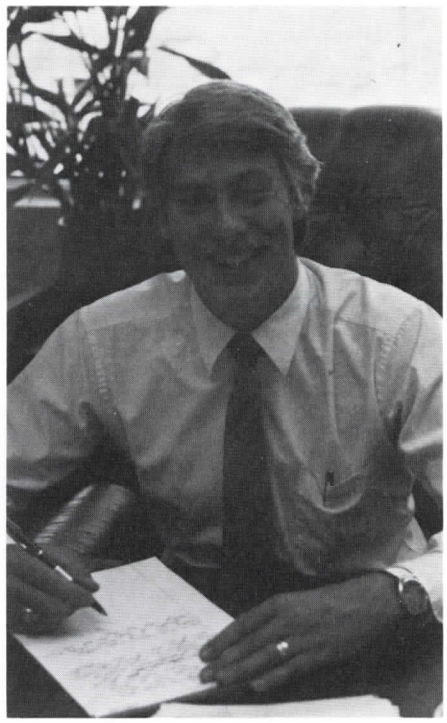
Future prospects

Salén Offshore's future prospects are highly favorable. Despite the historically cyclical nature of the offshore drilling industry, we are in a position to provide an attractive package of equipment, personnel and management, backed by experience, to operating companies in any offshore environment. Salén Offshore has a great potential to be second to none in the offshore drilling business.

David Williams

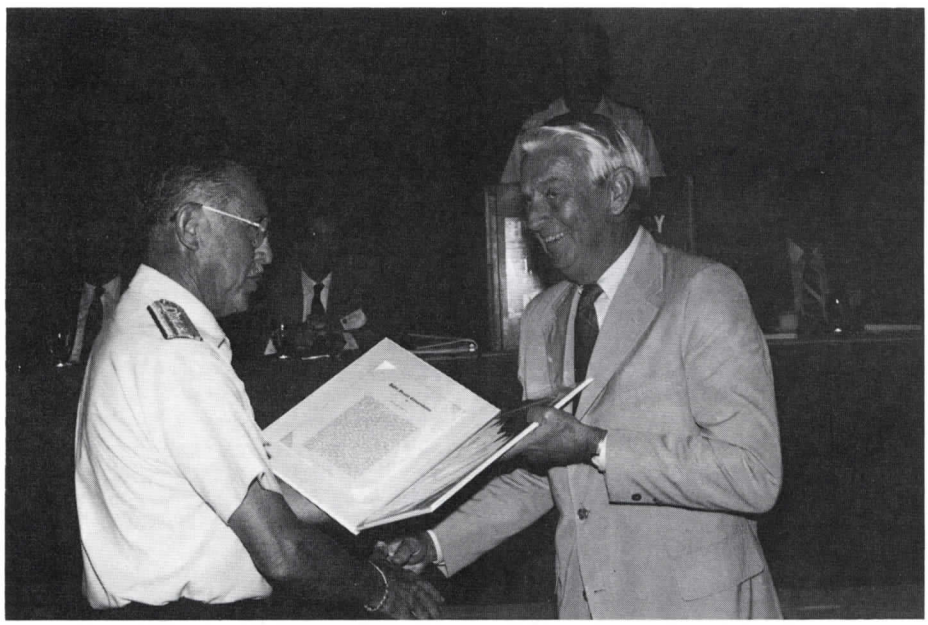


Henrik Baltscheffsky, of Sweden, is a marketing trainee at Salén Offshore Company.



David Williams is a marketing representative in Salén Offshore Company, Houston.

Salén Offshore Company recognized for safety again



Right: George Thomas, president, Salén Offshore Company accepts a commendation from the 8th U.S. Coast Guard District for the assistance rendered in the Coast Guard's OCS (Officers Candidate School) training program. Left: Rear Admiral W.H. Stewart.

Salén Offshore Company, based in Houston, Texas, has again been recognized for its outstanding safety record by the petroleum industry.

In April, Salén Offshore was honored by CNG Producing Company for the safe operation of the *Zapoteca* jack-up drilling rig (managed by the Salén Protexa Drilling Company Partnership). *Zapoteca* had the best safety record of all the rigs under contract to CNG.

Salén Protexa International Drilling Company, engaged in Brazil, received Second Place Class "C", in the International Category of the International Association of Drilling Contractors for 1983. The award was presented at the IADC Human Resources Conference in New Orleans, Louisiana, on July 17, 1984.

At the Conference, George Tomas, Salén Offshore president, also accepted a commendation from the 8th U.S. Coast Guard District for the assistance rendered in the Coast Guard's OCS (Officers Candidate School) training program. Salén Offshore personnel coordinated visits to their rigs so that future inspectors would have an opportunity to understand the various aspects of drilling for oil and of operating jack-up rigs. Salén Offshore has participated in this program for five years and is one of only nine companies ever to have received this honor in two consecutive years.

Salén Offshore also recognized the crews of *Salenergy III* for completing two years without a lost-time accident. Each crew member was given a rugged, folding knife inscribed with the rig name and personalized with his name or initials.

These awards are only an indication of the dedication to safe operations that President George Thomas and his management team have shown. As a result of their efforts, Salén Offshore has gained the reputation of being one of the safest drilling contractors in the world.

Fire fighting on board the rigs

Hands-on experience in fire fighting on board.

Most offshore drilling contractors take their rig personnel onshore to attend fire schools. Salén Offshore Company has reversed the process: it brings the fire fighting school to its MODU's*[1]), where each rig's equipment provides more effective results.

Several factors prompted this decision. Primarily, it was felt that the employees should know how to use fire equipment provided on each rig. Equipment naturally varies from rig to rig and the location of that equipment can change dramatically.

*) Mobile Offshore Drilling Unit

Being familiar with the exact location of equipment ensures that fire suppression systems will be used with dispatch. Along with this, the training sessions have, in the past, generally been limited to supervisors. This clearly needed changing.

Through Salén Offshore's proposal, everyone on the rig, not only the drilling crew from roustabout to tool pusher, but also service personnel and galleyhands, would receive training.

Chuck Praznik, Salén's safety supervisor, hit upon the idea while conducting a safety inspection.

He thought that it would be practical to teach fire protection on board, using equipment specific to that rig.

It was evident that what had been missing in existing schooling was hands-on training that included equipment available on the rig.

By going to each rig, be it a Friede & Goldman, Class L-780 or a Marathon Le Tourneau Class 82SD, the problem could be eliminated.

Training

Most fires that take place offshore are the small fires caused by carelessness. Salén Offshore's fire program, Incipient Stage Fire Training, is intended to provide hands-on experience that could be used to control the initial or beginning stages of a fire.

All employees receive a minimum of 3 hours training. The objective is to minimize danger to employees, the public, the equipment, and the environment by helping the crew to control situations caused by fires.

Several conclusions can be drawn from the schools conducted thus far:

- Fire training offshore is very cost effective.
- Hands-on training utilizing mockups and simulation provides practical experience only if the equipment is of the type actually available to the crew.
- Participants exposed to such training quickly develop confidence and are able to handle any rig fire emergency.

Through this kind of program the crews benefit the most since the equipment is "their equipment."

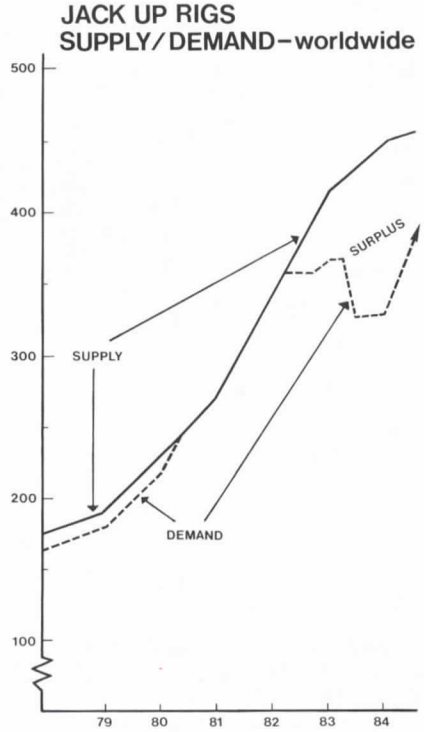
Reprinted from
Drilling Contractor,
May 1984

The Stockholm link with Houston

Eva Strössenreuther, secretary.

The Stockholm link with Houston. From left: Peter Lyth, marketing manager; Kerstin Bergh, market analyst; and Björn Dahlström, technical manager.

The Offshore Drilling Market



The jack-up market has recovered substantially since the slump in mid-1983. We expect this trend to continue.

Illustration: Olle Snismarck

General overview

The offshore drilling market grew rapidly during the 1970s in the U.S. sector of the Gulf of Mexico, historically the world's major offshore market, and in the North Sea. Such other important markets as Southeast Asia also grew substantially.

As a result of overbuilding, a slump occurred in the mid-1970s.

The world market improved again during the late 1970s, peaking in 1981 with 100 percent utilization for both jack-ups and semisubmersibles. This trend was due to rising oil prices worldwide and to the fact that, as a result of price deregulation in the U.S., it had become highly profitable to drill for gas in the U.S. Gulf.

The drilling market started to decline again in 1982, primarily due to the worldwide recession, which caused an oversupply of oil and falling real energy prices as a result.

A gas glut also occurred in the United States. It was caused by the recession, coupled with the negative effects of the remaining parts of the complex price regulations.

These factors resulted in a substantial decline in exploration and development drilling worldwide, especially in the U.S. Gulf. An oversupply of both jack-ups and semisubmersibles aggravated the situation. The market bottomed in mid-1983, after which it recovered. The utilization rate for all offshore rigs is currently 84 percent; the figure in August 1983 was 75 percent. Today, more jack-ups than ever are operating worldwide.

The current rig market

The two most important markets for jack-ups and semisubmersibles are the U.S. Gulf and the North Sea. Forty-four percent of the total fleet of drilling rigs is located in these areas, in which the market has improved considerably during the past year.

Other important offshore areas are South America, West Africa, the Arabian Gulf and Southeast Asia.

U.S. Gulf During 1983, two area-wide lease sales, the first ever in the U.S. Gulf, attracted record interest on the part of the oil companies. Three lease sales were held during 1984, also with encouraging results.

Based on the lease sales, we foresee a growing demand for both jack-ups and semisubmersibles in the area. This demand is already reflected in the utilization figures.

Jack-ups. In August 1983 the utilization rate for jack-up rigs was 57 percent, with 92 units drilling. Today, the utilization rate has risen to 86 percent. One hundred and forty-nine jack-ups are currently drilling, compared with 130 when the market peaked at the end of 1981.

Semisubmersibles. The number of semisubmersibles drilling in the U.S. Gulf has increased from 9 in August 1983 to 23 today, due to the fact that a large share of the leases sold were in deep water.

Summary. We believe that the demand in the U.S. for jack-ups and semisubmersibles will increase further, at a relatively fast rate, and that the market during 1985 and 1986 will be close to 100 percent utilization, subject to the following conditions:

- that the gas glut in the U.S. will disappear during 1985;
- that the leases sold will be drilled.

The North Sea. The political desires of the various governments in the North Sea region to secure domestic energy supplies constitute the overriding consideration in this area.

Accordingly, the drilling market in the North Sea has not been affected by the recession and the decline in the oil price to the same extent as other markets. On the contrary, the number of rigs drilling in the area has increased considerably since the end of 1981. Today, the utilization rate for semisubmersibles and jack-ups is close to 100 percent.

The number of jack-ups has doubled during the past two years due to increased drilling in the southern part of the North Sea, notably in the British and Dutch sectors.

The increase is due to:

- Tax relief measures in the U.K.;
- Higher gas prices paid to U.K. producers;
- The need to find new gas reserves to compensate for declining gas reserves in the Dutch and British sectors of the North Sea.

Drilling operations are expected to continue at a high level for the remainder of the decade.

Future outlook

We believe that the drilling markets in the U.S. Gulf and the North Sea will continue to improve. Markets in other areas of the world–especially Southeast Asia, West Africa, and the Arabian Gulf–have declined considerably since 1982. Signs of a recovery are discernible, however, in Southeast Asia and West Africa. The markets in India, Egypt and China are also growing.

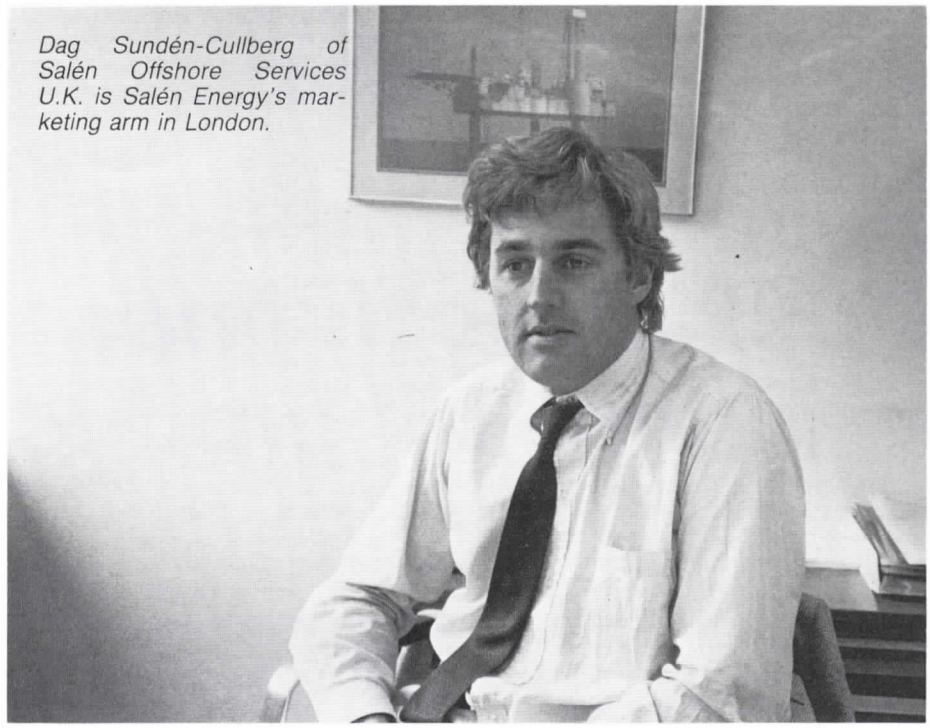
A balance in the rig market may develop during 1985-86. But the possibility of a new oversupply after 1986 due to the large rig-building capacity in the world cannot be ruled out. Hardly any newbuilding orders have been placed during the past few years. Even today, when the market is improving, we cannot see any signs of a strong increase in new orders. Some discussions about new rig investments seem to have taken place and a few letters of intent have been signed. These are, however, not for standard rigs. Accordingly, we believe that new orders will be based on a careful evaluation of the future market.

Kerstin Bergh

Salén Offshore Service U.K.:

Salén Energy's marketing arm in London

Salén Offshore Services U.K., based in Grosvenor Place, London, has been acting as the London marketing arm for Salén Energy's operations since May 1983. Dag Sundén-Cullberg works there in close cooperation with Salénia's subsidiary Exxtor.



Dag Sundén-Cullberg of Salén Offshore Services U.K. is Salén Energy's marketing arm in London.

At last Salén Energy has a man in London and the frequent traveling by company representatives to the European "oil capital" has been reduced.

As Salén Energy's marketing arm and information officer in London, Mr. Sundén-Cullberg—who was previously employed in Stockholm by Salén Energy—will maintain continuous contact with customers and public authorities. In London he can reach many of Salén Energy's potential customers. All oil companies—whether British, West African, Middle Eastern, Mediterranean, South American or Southeast Asian—have head offices or responsible representatives in London.

Setting up offices in London and Aberdeen is Salén Energy's first step in coming closer to Europe. This may sound paradoxical for a Scandinavian company, but the fact is that Salén Energy, particularly in its capacity as a drilling contractor, has had its entire market on the other side of the Atlantic. Backed by the extensive experience that the company has acquired during nearly 10 years in Houston, it aims to enter the attractive North Sea market. That market was most stable during the 1983 recession and is expected to be strong again in 1985-86. Ordering a new jack-up rig for the North Sea will be the next step.

Dag Sundén-Cullberg thinks that the rig sector is particularly attractive. And it is in this area that he has worked the hardest. His efforts involved comprehensive market analyses required to order the new jack-up rig. Further, he has the responsibility for chartering a rig for the Birten 2 well in Turkey and purchasing a great deal of equipment for the operation.

Mr. Sundén-Cullberg acquired his know-how about rigs during his time with Salén Energy and when he was employed by Sven Salén AB as a broker for several years. And he is still a true broker at heart. For example, he can only think of accepting payment for his work if a deal is concluded.

"Salén Offshore Services should not be a representational office," Mr. Sundén-Cullberg states. "We should run our own operations as an independent profit center. It's a good thing to know what the costs are. Otherwise it's difficult, at times, to defend one's own work. Now I can see that I've started earning money after just over a year here. It feels good."

Business can naturally be developed without limit. It is a matter of time and ideas. Dag Sundén-Cullberg can, for example, act as consultant and broker to other companies within the industry, especially in matters relating to rigs and supply ships—his special areas of expertise.

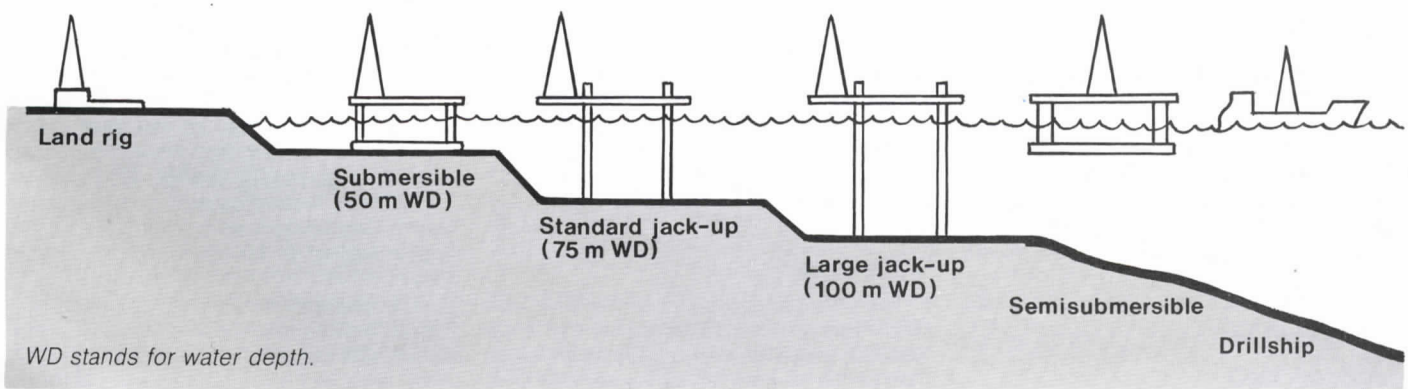
"But I've constantly got to bear in mind that Salén Energy is my principal so that there are no conflicts of interest," Mr. Sundén-Cullberg points out.

Today, only Dag Sundén-Cullberg and Annette Lay, secretary, are employed in London. But if the new jack-up rig becomes a reality, they expect a substantial expansion of the staff. An operating company will then have be set up to operate and market the new rig.

"There should also be good opportunities for establishing cooperation with Salénia in the area of supply ships," says Salén Energy's optimistic man in London.

Margareta Dahlstedt

Different kinds of drilling rigs



WD stands for water depth.

SOMUS:

Cost effectiveness in offshore oil production

SOMUS was formed because Salen Energy wished to diversify its operations and obtain firsthand insight into technological progress in the North Sea, an area considered a pacesetter in offshore exploration and production techniques.

SOMUS (Salén Oceanus Marine and Underwater Services), established on April 1, 1983, is a partnership of Salén Energy and the British company Oceanus Ltd.

The company, based in Aberdeen, Scotland, offers consulting and contracting services to the oil and gas companies operating in the marine and subsea environment. SOMUS comes into the picture when a prospect has been located by exploration drilling. The company's operations range from the development stage to the production phase, particularly in marginal oil and gas fields.[1] SOMUS can provide an overall view of the conceptual design of oil- and gas-field development.

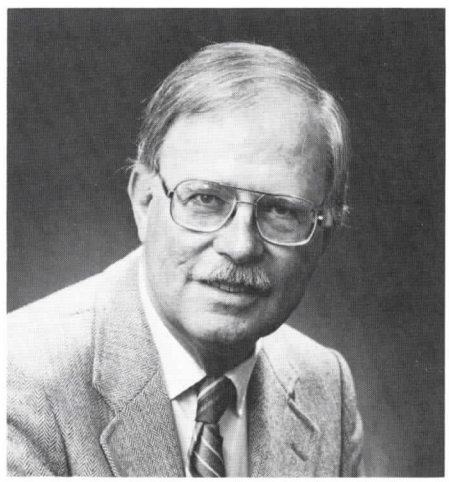
Bob Cockrill, SOMUS' managing director, has 15 years of experience in the North Sea oil and gas industry. In 1968 he left a secure career in the frozen food industry to start as a roustabout[2] with Phillips Petroleum on one of its Hewitt Field platforms.

Working in the North Sea at that time was considered insecure, "a hire and fire business," but the money was good. Bob Cockrill stayed with Phillips until 1975, when he went to work for Total, the French oil company.

In 1977 Mr. Cockrill was employed by Hamilton Brothers, the American company, to become superintendent of the Argyll Field in the U.K. sector of the North Sea.

[1] Small oil and gas fields with marginal profitability.
[2] Rig hand.

Bob Cockrill, SOMUS



Jim Graser, SOMUS Well Services

"Together, we can encompass the whole oil and gas production system," they say.

New production technique

The Argyll Field is a small field for which Hamilton developed a new production technique to make production profitable. A floating drilling rig – a semisubmersible – was used as a production unit. Hamilton found floating production to be a cost-effective solution. It was the first time this concept was applied in the North Sea.

Floating production from semisubmersibles has since become a well-known concept in the oil industry. Bob Cockrill received many inquiries about the new concept and the innovative repair and maintenance techniques used at Argyll. The number of marginal oil and gas fields in the North Sea has increased, making low-cost production necessary for profitable operation.

The market

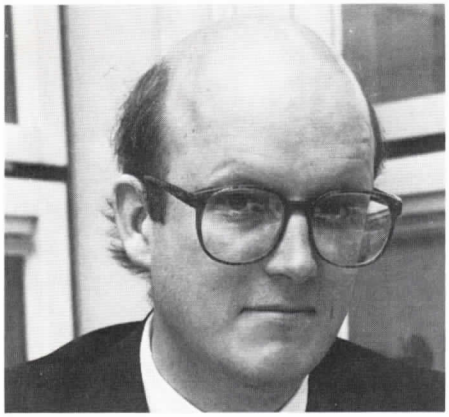
The first gas produced in the Southern Gas Fields in the U.K. sector of the North Sea was piped ashore in 1969. In the early 1970s, the oil companies discovered several important oil and gas fields north of this area. These fields included Ekofisk, Beryl, Forties, Brent, Frigg, Montrose, Fulmar and Argyll.

Several were major discoveries, creating a bonanza situation in the North Sea in the mid-1970s. There was a great upsurge in operations and spending, which lasted until the end of the 1970s. The large increase in the oil price at this time accelerated the process.

In 1979, fearing an oil shortage, the British Government imposed restrictions on crude oil exports, thus putting a temporary brake on expansion in the U.K. sector. It was general election year in Britain, and the oil companies had adopted a wait-and-see attitude. At this time, signs of a recession were also discernible in the United States.

All these factors caused a stagnation in North Sea operations for a few years and some effects of the slowdown can still be seen.

The situation is now changing rapidly. A stable political situation in the U.K., combined with tax relief on oil and gas production, have led the oil companies to inten-



Benny Fahlstadius in charge of development of offshore services within the Salén Energy Group. Photo: Ulf Lonäs

sify development. This is especially true of marginal fields, which the companies had been reluctant to develop earlier.

The problems in the Middle East have also made the oil companies more inclined to invest in politically stable areas. The upsurge in activity is expected to continue to accelerate during the remainder of the decade. The large number of drilling rigs currently operating in the North Sea indicate that many companies share this expectation.

SOMUS

In 1982 Mr. Cockrill decided that the experience he had gained from floating production could serve as a foundation for an independent business operation. He started looking for a partner who would make it possible to begin working from a broader base. In November that year he met Benny Fahlstadius of Salén Energy, and the SOMUS story starts at that point.

The Salén Group's international marketing facilities were an added inducement to Bob Cockrill. Also, according to him, "Salén is not afraid of unorthodox ways of doing things and new ideas. The company isn't too bureaucratic and the chemistry works."

Objective

SOMUS has primarily performed consulting services to date. While considering this a good way to start, the company does not intend to remain a consulting firm. Meantime, consulting services offer a means of developing contacts within the offshore industry.

SOMUS' primary goal is to develop into a contracting company which will be involved in an assignment from the planning stage to its completion. For this, it is necessary to provide services and equipment.

SOMUS Well Services (SWS)

Somus Well Services, a partnership of SOMUS and Well Services Ltd, owned by Jim Graser, was established in March 1984. It is hoped that the company will become a springboard into the contracting market.

Starting in 1954, Jim Graser worked for various oil companies in the U.S., Libya and Peru. He joined Hamilton Brothers in the U.K. as production manager in 1977 and was later appointed vice president and general manager. Mr. Graser started his own business in 1981, and in 1984 he helped to form SOMUS Well Services. This company will develop and market one of his inventions, a "subsea wirelining winch unit."

Wirelining

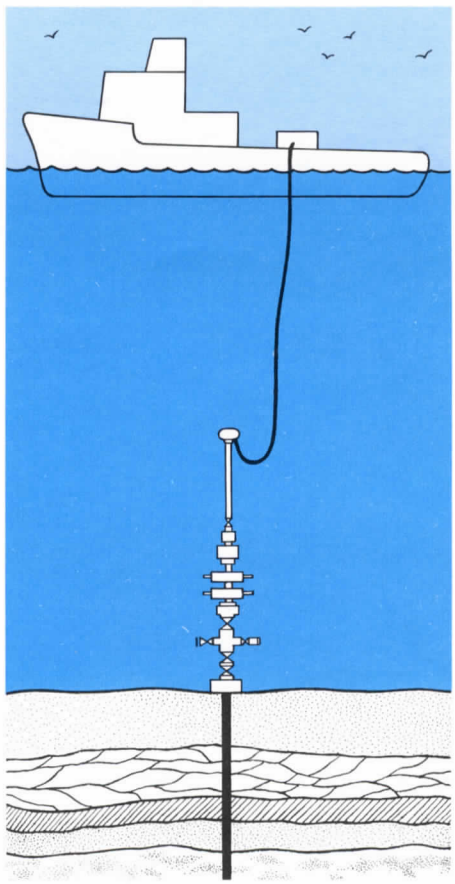
The SWS wirelining unit is a device for carrying out wireline work on subsea installations from a dynamically positioned (DP) vessel.

Wirelining, an accepted practice in the oil industry, permits access to the well tubing for repair work, changing of downhole equipment, measurements, etc.

Traditionally, wirelining is carried out via a pressure vessel in the pipe beneath a platform or a rig. Nowadays, many wells do not have platforms positioned directly above. Accordingly, a mobile platform has to be moved to the well, a very costly and time-consuming procedure.

SWS proposes to use a winch connected to an umbilical cord, through which the wireline unit can be operated from a supply vessel, which costs far less than a drilling platform.

The number of wells that are not located directly under platforms will increase due to the more frequent use of floating production and to the development of marginal fields.



The SWS wirelining unit is a device for carrying out wireline work on subsea installations from a dynamically positioned (DP) vessel. Illustration: Olle Snismarck

Satellites to larger fields will also become more common. These wells are connected to the original platforms through pipelines. In this context the SWS concept is also useful. Thus, SWS' future prospects are good.

One wirelining unit is currently being constructed in Montrose, south of Aberdeen. After tests in the workshop and in a land well in Montrose, this unit is expected to be introduced in North Sea operations next spring.

Extended well testing

Another concept of increasing interest in the development of marginal oil fields is extended well testing. This method enables an operator to test the commercial and technical viability of a new prospect in a cost-effective manner.

Some expensive mistakes have been made in the North Sea. Platforms have been installed over reservoirs that have not produced as anticipated. Wells are tested for too short a period (sometimes only a few hours) to establish confidence in the data obtained. This is not a serious problem for major discoveries, but is critical for marginal prospects.

SOMUS offers a three-month testing program, which provides reliable data on

- product yield;
- production rates; and
- types of fluids that will be produced.

SOMUS provides a mobile platform, either a jack-up or a semisubmersible, depending on water depth. It also supplies a transportation system via a subsea pipeline and tanker. This enables the operator to obtain accurate reservoir data over a prolonged period. As a result, he can:

- determine the technical and economical feasibility of development; and
- provide an interim production facility which gives an early positive cash flow.

The oil ascends through a riser to the rig, where it is processed so that it can be transported easily by ordinary tankers. The oil is pumped from the platform through another riser and pipeline to an unloading station, which can be a single-point loading buoy and tanker, or a dynamically positioned tanker.

In summary, extended well testing means that the oil company can reduce the risk of development and earn money during the testing period.

The unit can be used as a temporary production unit until a more permanent production solution has been decided on and built.

According to Mr. Cockrill, the problem with new concepts in the oil industry is that "oil companies want something that can cure their problems today and not offer promises for tomorrow." The companies are only interested in concepts that have a sound track record and do not want to be the first to try new inventions.

Despite this, Bob Cockrill is highly optimistic about the future of extended well testing. Large marketing efforts are, however, necessary.

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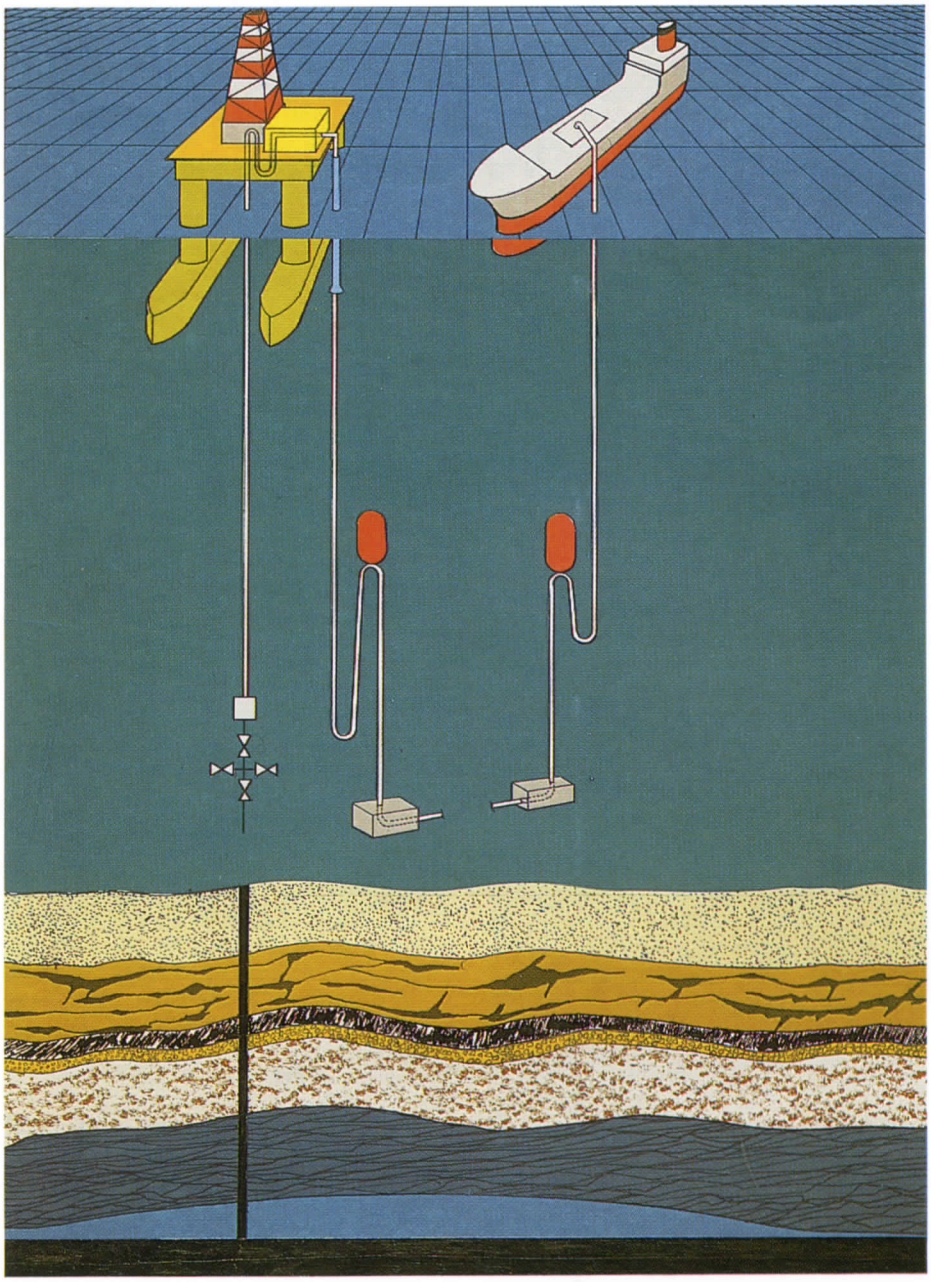


Extended well testing—a cost-effective method for testing the commercial and technical viability of a new oil field.

From left: Jim Graser, Bob Cockrill, Diane Cockrill and Pamela Gordon.

SOMUS and SWS

"SOMUS can provide services that start at the wellhead on the seabed, extend to a production system and to a loading system. SWS can provide services from the wellhead downwards to the producing reservoir. Together, we can encompass the whole oil and gas production system," Mr. Cockrill says.

Slow and steady expansion

SOMUS is expanding its operations slowly and steadily. The number of repeat assignments received by the company testify to the reputation it has already built up.

Development of marginal fields will become increasingly important in the U.K. since it is likely that most of the large oil fields have already been discovered. This means that the markets for SOMUS and SWS will grow. Even if the oil industry were to stop expanding for some reason, there will still be a substantial volume of maintenance work to be done on existing installations.

'SOMUS can see the whole picture'

SOMUS' main competitors are the diving companies, which are diversifying into offshore and subsea engineering, and the other offshore contractors that provide subsea related services. But SOMUS' great advantage is that it has "inside" experience of the oil company way of thinking. According to Bob Cockrill, "SOMUS can see the whole picture."

The company's experience in cost-effective development, maintenance and operation is another major advantage.

People trained in the offshore business, particularly those who worked in the North Sea during the 1970s, believe that oil production is inevitably very costly. Operators have become used to thinking in terms of vast sums. But SOMUS can suggest alternative ways of performing certain operations cost-effectively. SWS wirelining is one example.

SOMUS and the Salén Group

Bob Cockrill and Jim Graser can see many ways of cooperation with the Salen Group. For example, Saltech's engineering expertise related to the marine environment offers great scope for cooperation and Salén Tanker's know-how would be invaluable in extended well testing.

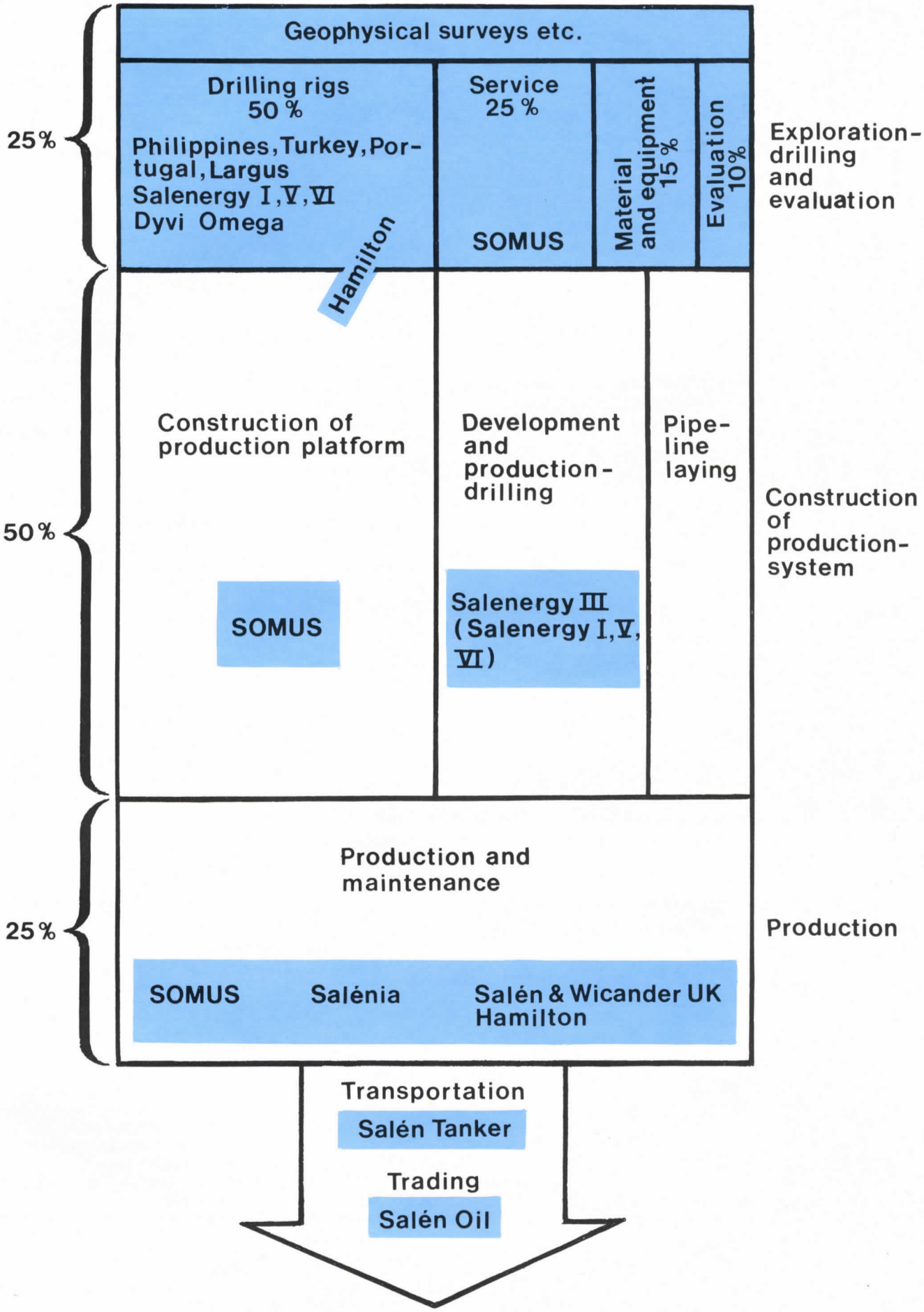
If a small oil company wishes to develop its first license, it usually contracts all services in the beginning.

SOMUS, together with the Salén Group, can offer:

- Exploration and development drilling;
- Extended well testing and early production;
- Development studies;
- Project management and supervision;
- Installation services;
- Operating and maintenance services.

Kerstin Bergh

The oilproduction chain



The complete system

Detection Instruments Group Limited, a British subsidiary of Salén & Wicander, is a new company, formed in July this year by merging Detection Instruments Ltd, Salén Ditech Ltd and Salwico Marine, which had been acquired by Salén in 1981. The company specializes in the design, manufacture and supply of fire and gas detection systems, together with associated extinguishing equipment.

"Detection Instruments Group is active in both the industrial and marine markets, but its "complete system" is designed primarily for the offshore oil production and petrochemical industries," says Göran Colldahl, managing director of Salén & Wicander (UK).

Detection Instruments Group is perhaps the most active of the S&W Group companies in the offshore sector.

Investment in fire and gas detection systems for the oil industry is a natural step for S&W, which already dominates the fire detection market in the shipping industry. The systems employed by the oil industry are more complicated, however, and incorporate partly different equipment.

By acquiring the three British companies, S&W gained access to appropriate products and markets. The combined sales of these companies to the offshore market in 1983 amounted to about £2 million.

Detection Instruments Group Limited is active in both the industrial and marine markets, but its "complete system" is designed primarily for the offshore oil production and petrochemical industries.

Before the merger, the three British companies had acquired substantial know-how and experience during the past 10 years in the production of the high-integrity electronic detection systems required for operation in the hostile North Sea environment. The result is an impressive list of multinational customers, including Amoco, B.P., Esso, Mobil, Marathon Oil, Phillips Petroleum, Pertamina, Shell, Statoil and Total Oil.

Three functions

The "complete system" integrates the three functions of detection, control and extinguishing.

Considering each function in turn, detection may be considered the first step, where "field devices," which are sensing heads to monitor protected areas, are able to detect gas, flame, smoke or heat by different methods and with varying degrees of response and to transmit a signal.

The "trump card" in the Salén system is the gas detector. It is rated highly by the oil industry. Other companies have concentrated on developing sophisticated system software—a way for the computer industry to enter this industry.

The field devices are connected to the heart of the system, the central control unit. This may vary in size and design from a simple card rack to a complex computerized console. However, in each case, the purpose of the central control unit is to provide:

- Monitoring and checking of field devices and all electronic circuits.
- Analysis and acceptance of transmitted signals from field devices according to predetermined logic requirements.
- Provision of shutdown sequences as required.
- Initiation of extinguishing systems.
- Provision of alarms and an indication of "complete system status."

Once the central control has established that a fire condition exists or, in the case of gas detection, that a potentially dangerous level of gas is present, an extinguishing agent must be applied to achieve a "complete system" solution.

Extinguishing methods vary considerably, both in principle of operation and in the medium used to put out the fire or prevent explosion. The type selected will depend upon the process or hazard being protected.

Apart from the exclusive range of Halonyte gaseous agent systems designed and manufactured to Lloyds' specifications, Detection Instruments Group also specializes in the design and supply of water sprinklers, deluge installations and foam systems. Detection Instruments Group acquired the exclusive marketing rights for Halonyte extinguishing equipment in 1984.

The accompanying diagram, showing various field devices, central control methods and Halon 1301 gas extinguishing, demonstrates a typical "complete system."

Exports—50 percent

S&W's target group does not consist of the largest platforms—which need highly sophisticated systems—but the medium-size installations on land at at sea.

Exports from Britain account for approximately 50 percent of Detection Instrument Group sales. The merger was a move by the member companies to become more effective in the export market. Another important step in Detection Instrument Group's efforts to increase its export share is to build up a network of agents to sell the "complete system" worldwide.

An attractive market is India, where S&W is making substantial investments. S&W is gaining a foothold through its Indian agent and is aiming at local manufacture.

"In my view, India is a market with enormous potential," says Göran Colldahl, managing director of Salén & Wicander (UK) Ltd, "and we'll be going into the offshore and onshore business. Among the items we're delivering are gas detection systems to a large number of installations which charge gas cylinders for household use."

As part of its continual expansion program, Detection Instruments Group is developing new or improved products. One with exciting prospects is the H_2S detector. The reason is that, as production wells mature, water injection is used to assist extraction; this, in turn, produces hydrogen sulfide. Since this gas is poisonous even in small concentrations, ther is a great need for an improved detecting device.

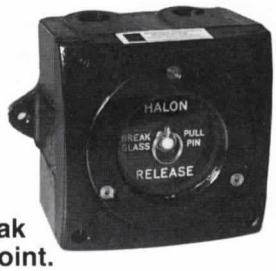
A.R. Bedlow
European Sales Manager

Field devices

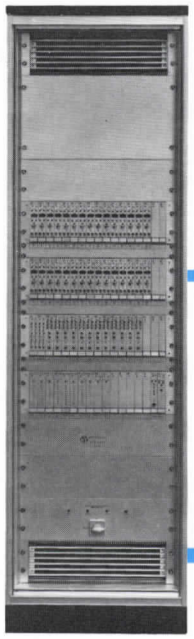
Ionization smoke detector

Fast response UV flame detector

Flammable gas detector



Manual "break glass" call point.

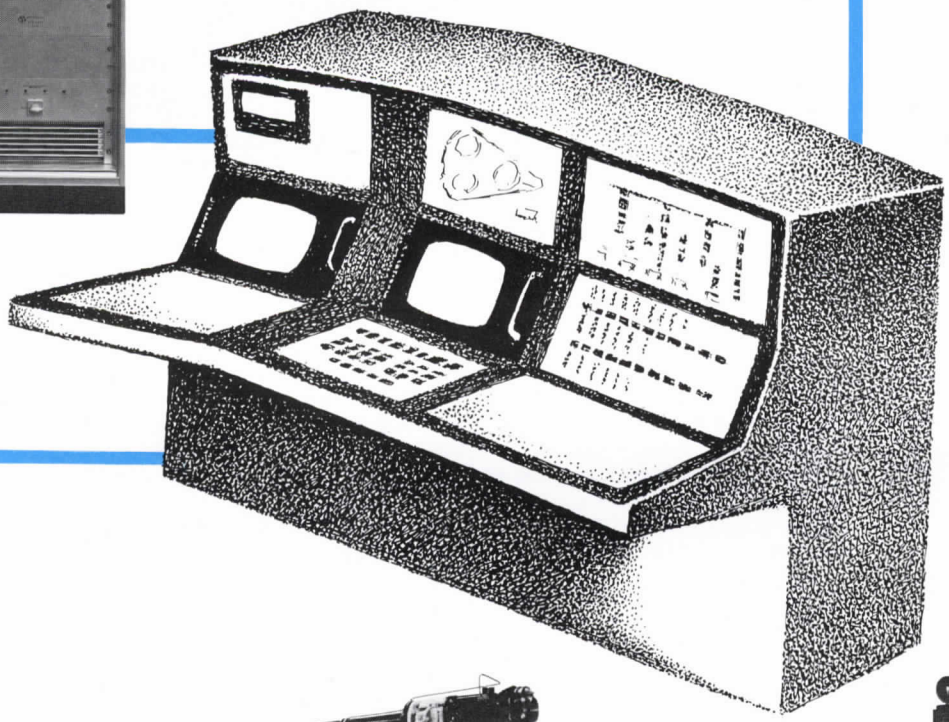


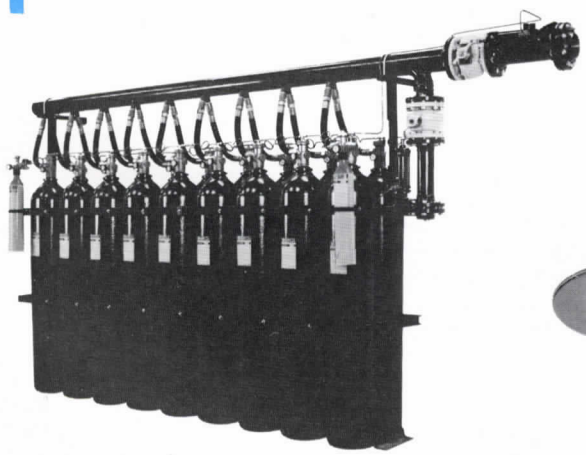
Control console with circuit cards to receive fire signals, sound alarms and actuate the extinguishing system.

Central control

Distributed system

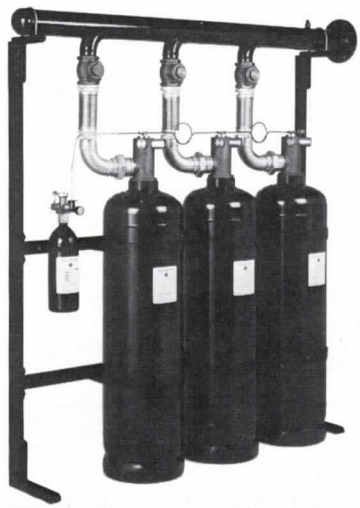
Alternative programmable logic controller providing sophisticated monitoring shutdown and alarm.





Central bank high-pressure (42-bar) Halon 1301 extinguishing system with selector valves.

Typical discharge nozzles for Halon 1301 system.



Alternative central bank low-pressure (26-bar) Halon 1301 system.

Diagrammatic arrangement of the "complete system," showing typical field detectors linked to a console or computer control center which actuates the extinguishing system.

Illustration: Olle Snismarck

Salén Energy expands trading operations

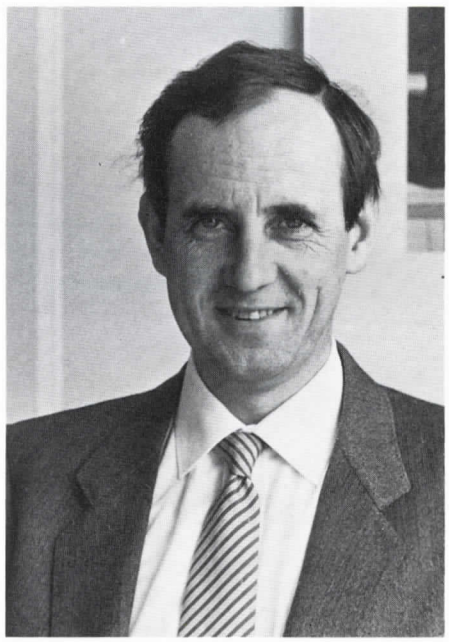
If a name were to be invented to cover all our trading operations, an appropriate one would be "Salén Synergy." Why? Because all our trading activities are based on synergy factors within the Salén Group.

Salén Energy purchased Salén Coal in 1982 due primarily to the increasing importance of coal as a substitute for oil. But other strong factors included: Salén Dry Cargo's extensive experience in shipping coal; Siwertell's unique bulk handling system, bought for many coal discharging ports; and Saltech's capabilities in port design. Salén companies are involved in all the links in the coal chain, ranging from producer to end user.

Salén Oil was formed from the Salén Bunker Division. Salén Oil buys around one million tonnes of bunker fuel yearly for Salén Reefer Services, Salén Tanker and Salén Dry Cargo. The total volume purchased for the Salén shipping companies gives Salén Oil good bargaining power in obtaining cargo lots for trading purposes.

Salén Resources in New York, a joint venture between Salén Energy and Salén Dry Cargo, is engaged in the international coal and solid fuels market. The company works closely with Salén Coal in the Scandinavian market – "Salén Synergy"!

Thomas Sundberg



Thomas Sundberg, president of Salén Oil, has overall responsibility for Salén Energy's trading operations.

The oil market

	From March 21, 1984	to July 23, 1984	
Premium gasoline	$285	$260	(-8.77%)
Regular gasoline	$275	$251	(-8.73%)
Naphtha	$268	$238	(-11.19%)
Jet kerosine	$274	$252	(-8.03%)
Gasoil	$255	$222	(-12.94%)
Fuel oil (1% sulfur)	$187	$181	(-3.21%)
Fuel oil (3.5% sulfur)	$181	$178	(-1.66%)

The Organization of Petroleum Exporting Countries (OPEC) appears to be determined to prop up crude oil prices by continuing to restrict production levels despite the adverse effect of this policy on the economies of certain member countries, particularly Nigeria, Iraq and Indonesia. OPEC's attitude is influenced by a continuing fall in world demand for oil, declining product prices and increased production by non-OPEC sources.

The latest estimate of world production of crude oil and natural gas liquids (NGL) is 57.65 million barrels per day (b/d). OPEC accounts for 18.62 million b/d (32.3%), non-OPEC for 24.03 million b/d (41.7%), and countries with a centrally planned economy (CPE) for 15.0 million b/d (26.0%). The most reliable current estimate of Western demand for 1984 is about 45.8 million b/d. Including the CPE countries, the total would be about 56.8 million b/d, resulting in a current oversupply of about 850,000 b/d. If the Iran/Iraq War were to end, the situation could be aggravated by the possible release of another 2.0 million b/d into the market.

Spot market product prices per metric ton in ARA (Amsterdam/Rotterdam/Antwerp) fell as follows during the period indicated:

Fuel oil prices in ARA ports have not fallen as much as the rest of the product barrel due to sustained demand for high-sulfur material, largely attributable to the British coal miners' strike. An added complication for fuel oil pricing is the fact that straight-run fuel oil – the ideal bunker fuel for ships – is increasingly being used as a feedstock in modern refineries with cracking facilities to produce lighter products.

Since some oil producing countries need to maintain high production levels for economic reasons, crude oil prices will have to fall unless there is a dramatic increase in consumption or unless OPEC can make further cuts in production by reallocating quotas.

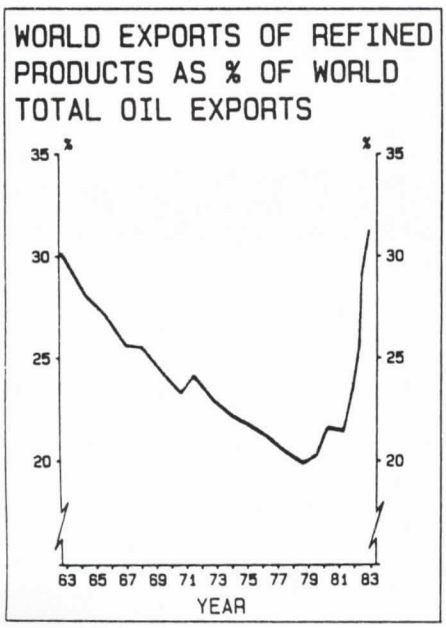
Other factors which could jointly force world crude oil prices down would be:

- Refinery cutbacks beyond minimum commercial levels due to low margin returns;
- Further sustained increase in world oil surplus production;
- Continued stagnation of the world demand for oil.
- Drawing down stocks worldwide;
- Increase in debt defaults on the part of less developed countries (LDC) leading to inability to finance oil imports in expensive US dollars.
- World economy entering into a period of deflation;
- Lower product prices and/or uncertain demand levels.

The International Energy Agency (IEA) forecasts an increase in demand by the OECD countries to 49 million b/d by 1990, a contraction of this market during the 1990s, and a rise in demand to 53 million b/d by the year 2000. However, there is a likelihood of lower crude oil prices in the near future.

Salén Oil

Photo: Håkan Målbäck



Source: Platou

In view of the current situation of the world oil supply, OPEC will have to maintain a strong sense of unity to withstand internal and external pressures.

On January 1, 1983, Salén Energy assumed responsibility for the Salén Bunker Division. The Division was converted into a separate profit center, Salén Oil AB, on July 1, 1983.

The main objective of Salén Oil is to provide the Salén Group with bunker, diesel and lubrication oil efficiently and economically. Instead of purchasing oil for specific ships, the company's purchasing officers now concentrate on supplying ships operating in specific regions.

Birgitta Holmlund, Svante Carlberg: The Americas and the Pacific Basin; Lars Falck, Håkan Hjelm: Mediterranean, Africa and Middle East, up to Singapore; and Stig Brander, Anita Löfstedt, Northwestern Europe, including Scandinavia.

Increased knowledge

As a result of this change in purchasing routines, our knowledge of these specific markets has increased and results have improved.

New recruits: Urban Cederborg, with a trading background in the internatinal oil trading company Marc Rich, is now the executive vice president in charge of daily operations; Svante Carlberg and Håkan Hjelm have been recruited on the purchasing side. Sigvard Jonsson, assisted by Gun Adolfsson, is handling the company's accounts.

Salén Oil can offer the services of Carl-Gustav Nyström on a consultancy basis. As a result of his long oil company experience he is thoroughly familiar with oil grades and problems arising from the use of poor grades.

Unfortunately, poor grades present a growing problem, since sophisticated refining methods are increasingly being used to raise the yield of light products. This leaves a residual fuel oil – used as fuel in our ships – of steadily declining quality. Moreover, the demand for heavy fuel oil for power generation has fallen drastically, whereas the demand for light products has increased. This has substantially reduced the size of the total fuel oil market.

As a result of more fuel-efficient engines on new ships and specific fuel-saving measures, oil consumption by the Salén fleet has been reduced. In this connection, Salén Oil is expanding sales to external shipping customers, thereby utilizing our long-standing expertise and purchasing power.

Entire shiploads of oil products

Finally, Salén Oil also aims to utilize its worldwide market coverage to trade in entire shiploads, primarily oil products. Trade in oil products, which had been declining for some years, is now increasing rapidly following the build-up of refinery capacity in oil producing countries. The company has bought and sold some cargoes.

Salén Oil's next move will be to link up with external partners for international operations.

Coal market survey:

Current demand up, but long-term outlook dependent on world economy

There has been a considerable short-term rise in demand for coal by utilities and steel mills, due primarily to increased business activity, following the recession, in the U.S. and Western Europe. Japanese steel mills, among the world's major purchasers of coal, have also stepped up purchases as a result of unexpectedly high production rates.

Demand for coal in the medium and long terms will depend on world economic trends and the pricing structure for oil imports. If crude oil supplies remain plentiful and inexpensive, as is currently the case, conversion to coal may be somewhat delayed. Supply situations in the key coal-producing regions of the world are described below.

United States

Coal producers are virtually sold out at present as a result of hedge buying by utilities and industry in anticipation of a miners' strike in October. At this stage it is difficult to predict the duration of such action, but estimates range from one to three months.

Coal prices have risen dramatically compared with those of a year ago due to the sharp domestic upturn. The continuing strength of the dollar, along with high domestic demand, has made U.S. steam coal uncompetitive in export markets. However, U.S. coking coal, an essential ingredient in coke production for steelmaking, is in great demand internationally by steel mills.

U.S. coal is expected to regain its international competitiveness once domestic demand falls after the expected strike and the dollar shows signs of a downturn.

South Africa

All major South African suppliers have full order bookings through the end of the year. Their European and Pacific Basin markets are strong. Production costs are expected to rise somewhat in the long term following the anticipated increase in unionization. South African coal should remain competitive as a result of mechanization, however, provided no major political restrictions are imposed in potential export markets.

Australia

The order books of Australian steam and coking coal producers are nearly full as a result of demand in traditional Pacific Basin markets. In addition, the country's coal producers have been aggressively attempting to expand their market shares in Europe, primarily at the expense of U.S. coal suppliers. Recent successes in Europe are also due to the depressed shipping market, since freight rates to Europe, which are normally high, have been kept within competitive limits.

In the longer term, the national pricing structure will have to be carefully evaluated since Australian suppliers would suffer substantial losses if they were to attempt to match South African C&F prices to Europe. The unsettled labor/management situation in Australia will have to be stabilized if the country is not to lose markets to competitors as a result of industrial strife and delays.

Poland–Coal Export

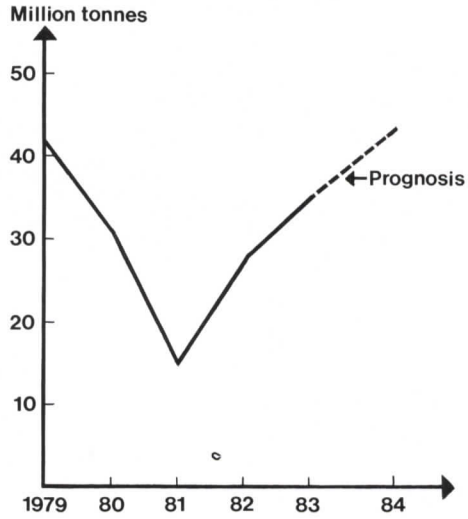


Illustration: Olle Snismarck

Colombia

The Colombian coal project, a joint venture between the Colombian Government and Exxon, is nearing completion. The new port is scheduled to open in 1985. With 15 to 25 million tons of high-quality low-sulfur steam coal available for export, Colombia should become a formidable competitor to other major coal-producing nations.

Soviet Union

The Soviet Union's primary export market is Scandinavia. Although the U.S.S.R. has recently mounted an aggressive marketing campaign, it is not expected that the country will play a major role as exporter to world markets.

Other coal producers (and potential coal-producing regions) play a lesser role in world coal trade. Canada, for example, will continue to supply customers primarily in the Pacific Basin, supplemented by occasional sales to consumers in Western Europe. Possible future coal projects in South Africa and the Republic of China may ultimately have some effect on world markets, though this is not expected to occur in the short and medium terms.

Europe

Anxiety is mounting in the U.K. and no solution is discernible in the near future. To fulfill contracts, the National Coal Board has purchased coal from the Continent. Some deliveries have also been made to Sweden from these stocks. A certain amount is being imported through smaller ports in the U.K. at very high prices—Continental list prices or above.

Substantially fewer unsold cargoes are entering ARA (Amsterdam - Rotterdam - Antwerp) ports, but when the price level has been increased by 15 to 20 percent it is expected that the supply may rise again towards the end of the third quarter.

Higher prices are being demanded consistently, one of the main reasons being the expected coal miners' strike in the U.S. this autumn. If this were to be short or if it were not to take place, and conditions in the U.K. were to settle down, coal prices may again be expected to fall.

Weglokoks, Poland, has sold all available quantities for the second half of 1984 and is not making any new bids. The agency expects to set a new record in 1984—43 million tonnes, compared with the forecast of 40 million tonnes. But the figure for 1985 is expected again to be 40 million tonnes or somewhat less.

As regards Sweden, imports have proceeded as planned. A higher share has been supplied by European producers, especially Poland. In the late summer the National Board of Economic Defense invited bids for approximately 150,000 tonnes from emergency stocks in southern Sweden. Export of this coal is prohibited. Hence this quantity will affect imports for 1984-85. Further quantities of this size will possibly enter the market later this year. Of further interest for the Swedish coal market and its future are the detailed regulations which became effective in June, when the Swedish Parliament passed the coal bill put forward by the Minister for Energy and the Minister for Agriculture.

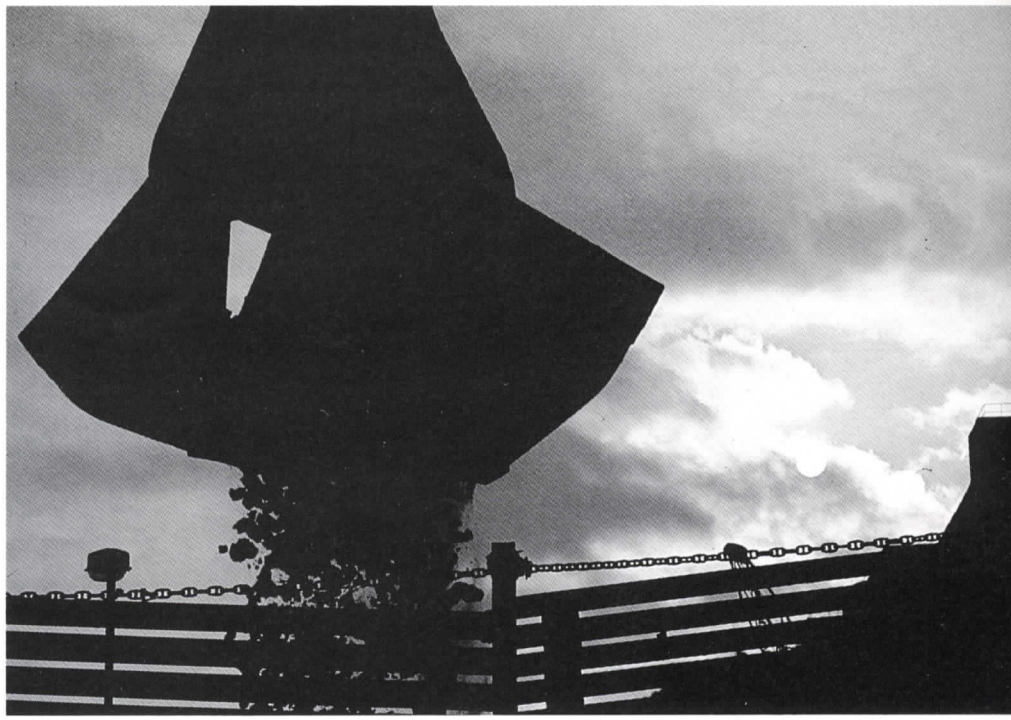
Coke

The disturbances in the United Kingdom and the rise in consumption in the United States have led to a shortage of certain grades. Prices have risen and a fact worth noting is that coke exports from Japan to Europe and the U.S. are again under way. Coking plants will gradually be scrapped in Europe, without new plants being constructed. Hence, in the long term, the supply of coke will decrease, as will demand. Accordingly, higher prices may be expected next year for most grades.

Petroleum coke, a by-product of oil refining, is currently an actively traded commodity in view of its high inherent heat value, which compares favorably with coal. Major customers are cement plants and steel mills in Europe and Japan, which use petroleum coke as a substitute for coal or coke in their operations. U.S. oil refineries remain the chief supplier of this product. The market for petcoke will remain strong as long as the upward trend of the world coal market continues and low-price spot sales by coal producers in the U.K., Poland and South Africa decrease.

Salén Coal AB:

Plays key role in Swedish coal market



Coal will play an increasing role in Sweden's energy balance. *Photo: Per-Olow*

Salén Coal AB, acquired in 1982, is the chief exponent of Salén's involvement in Sweden's future solid fuels supply. Coal will play an increasing role in Sweden's energy balance, particularly in view of the future discontinuation of nuclear power in the country. Salén Coal will play a key role in this market.

Anders Forssell, president of Salén Coal as of August 1, 1984.

Salén Coal, employing about 20 persons, has storage facilities in Lidköping and Helsingborg with a total storage capacity exceeding 20,000 tonnes. The company screens the coal into grades, necessary for optimal utilization of the product. The company also supplies coke and briquettes.

Coal, as a source of energy, is not a homogeneous product. Price, energy content, grindability, sulfur content, size fractions, volatility and ash content and ash characteristics are some of the parameters which are of decisive importance, from a technical, economic or legal aspect, for the use of coal. Swedish legislation currently imposes substantially harder restrictions on consumers than previously. This makes it all the more necessary to have serious, competent coal suppliers with adequate capacity and ability to supply the optimal grade for the customer.

Coal trading can be conducted as a pure agency operation, in which Salén Coal evaluates suppliers and handles the logistics. Or the company can buy coal for its own account and resell it at an agreed price from its own stocks.

Salén Coal can utilize important synergistic effects, through its relations with Salén Dry Cargo, an experienced shipper of coal; through its links with Siwertell's bulk handling equipment; and, finally, through its frequent exchanges of information with Salén Resources in New York. This, together with the company's internal competence, makes Salén Coal highly competitive in the Swedish coal market.

Anders Forssell

Increased world industrial activity has also strengthened the market for foundry and blast furnace coke, used primarily by steel mills and industry. However, major world trade in these commodities is only possible after sustained high-capacity utilization by steel mills, which consume the bulk of this material in the form of blast furnace coke.

Coal will always be in demand

Despite the cyclical nature of world coal production and consumption, there will always be a substantial market for solid fuels. As long as oil remains significantly more expensive than coal, world demand for coal will remain strong. Hence conversion to coal by utilities will be the logical choice. In view of growing reluctance on the part of many nations to increase their dependence upon nuclear power, coal will continue to be the preferred source of energy.

Salén Resources, Inc.

Latest addition to Salén family

Salén Resources is the latest addition to the Salén trading family. Started about a year ago, the company is a joint venture between Salén Energy and Salén Dry Cargo. The company's main purpose is to develop Salén's trading potential in the international coal and solid fuels market – a challenging and rewarding task.

Joining forces with other Salén companies

From the start, given the limited availability of personnel, we developed a project orientation involving the resources of other companies within the Salén Group. For example, we are representing one of the largest coal groups in the world in the sale of their product to a major utility in the U.S. In this project we have joined forces with Salén Dry Cargo and Siwertell in offering the transportation and coal handling facilities at the discharge port. In another instance, through Salén Reefer's contacts, we are carrying on discussions with key parties with a view to entering into a major coal project. We hope to develop this project into a coal marketing representation agreement which would involve other members of our group, including Salén Coal.

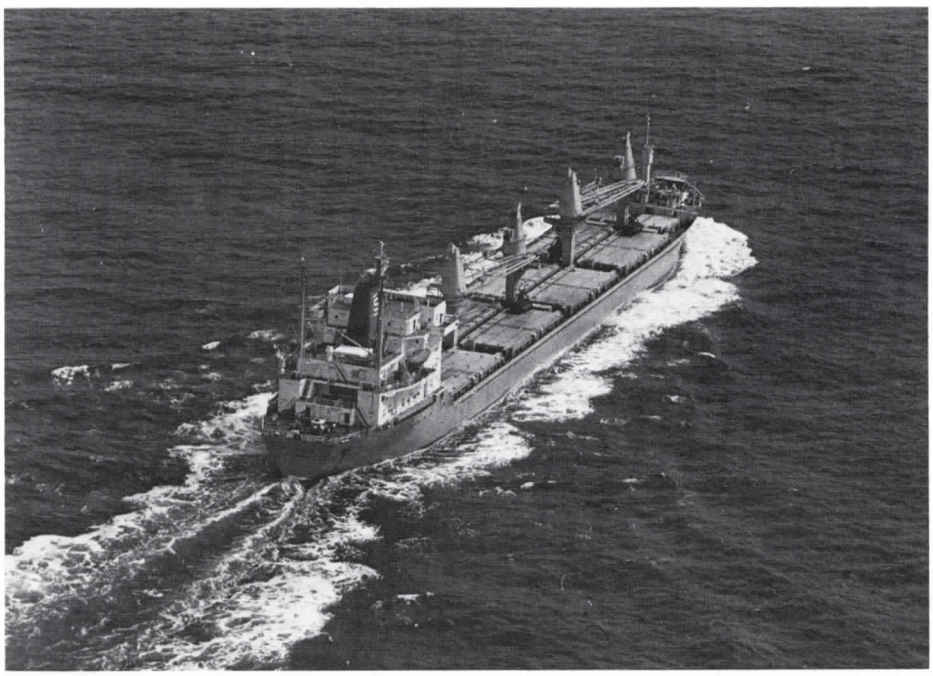
To expand our trading network, we have also tapped Salén Dry Cargo's resources by developing an agency agreement in a major coal consuming country with one of the latter's shipowning partners. Finally, Salén Resources will participate in a project with Salén Energy, where the latter has signed an agreement in principle to establish an international project development and trading company, in conjunction with major outside partners, which will focus on key regions of the world that offer interesting growth possibilities. The above list provides a brief illustration of some of our activities.

Salén Resources has also commenced spot trading in petroleum coke, a by-product of oil refining.

Synergistic effects

Synergy may be defined as cooperative action among groups, whereby the total effect is greater than the sum of the individual effects. This is the key to what we are trying to accomplish at Salén Resources – to develop new business in active cooperation with the various companies within the Salén Group, initially with emphasis on the international solid fuels market. We are also aiming to increase the visibility of the Salén Group – particularly Salén Dry Cargo – in the international bulk trading community. By providing cargoes of desirable commodities, such as petroleum coke and coal, we have been able to establish close contact with some of the major bulk shippers. Clearly, trading and the marketing of shipping services are closely allied functions.

On joining the company in 1983, Mel Diamond said: "Salén is a trading company, without knowing it."



Salén Resources, Inc., is a joint venture between Salén Energy and Salén Dry Cargo.

Essentially a trading company

When I joined Salén, I said that, given our international network, we were a trading company and didn't know it. I can now state that we are moving closer to our goal and we hope to involve even more of our companies and personnel in utilizing their creative input to expand our commercial opportunities in the trading sector. It has been an exciting and challenging year, and I am proud to be a member of the Salén team.

Mel Diamond
President, Salén Resources, Inc.

Salén Energy's Financial and Legal Departments

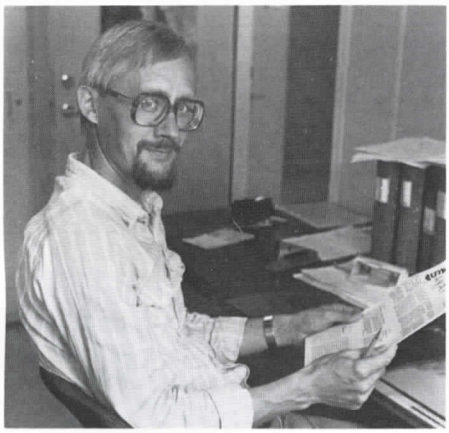
Clas Regeheim, Anders Ljunggren, Lotta Björkström, Kirsti Häcki, Gunilla Jonsson, Peter Månsson and Lilian Fredman belong to the Legal and Financial Departments.

The responsibility of the Financial and Legal Departments is reflected to a large extent by Salén Energy's role in the Energy group as a whole.

Salén Energy's main task is to coordinate and manage the projects in which we are involved.

Salén Energy is not a single unit, but a group of nearly 20 companies. The group is continuously diversifying, with new operations being added and old ones being restructured. New companies are formed as others leave the group. Since operations are conducted outside Sweden, each project must have a special contractual set-up with regard to company structure and taxes. The constant changes in corporate structure require viable financial and legal solutions.

Anders Ljunggren, financial manager of the group, has overall responsibility for financial activities and taxes. He works in close collaboration with Clas Regeheim, the company's legal counsel, especially on matters relating to company structure.



Bengt Norberg is in charge of invoices, payments, and many other matters.

Legal work

Clas Regeheim is responsible for all legal activities within Salén Energy. The complicated corporate structure, together with all the normal legal activities associated with annual meetings, Board meetings, etc., places substantial demands on him. To the extent that the work concerns foreign subsidiaries, he naturally draws on the support and advice of local law firms.

In addition, there are all the legal responsibilities related to the companies' commercial activities. These include drilling contracts, farmout agreements and the like. All in all, our corporate lawyer is a very busy man, who sometimes wishes he were twins!

Exploration

Financial operations connected with exploration are complex. Such activities are the prime responsibility of Peter Månsson, assistant financial manager.

Exploration often necessitates having a local subsidiary or branch office, in which the financial activities can be handled. These activities are then reflected in financial reports to Stockholm. The work involves keeping in regular contact with, and paying visits to, local management. The first job is to set up the office, then to ensure that the reporting is compatible with the applicable contracts and the group's accounting system. Keeping the accounts in three currencies—U.S. dollars (as specified in the contract), local currency and Swedish kronor—represents a major problem.

According to Swedish law, oil exploration is classified as a direct investment abroad. This means that such operations must be approved by the Central Bank (Riksbanken) and be financed by foreign loans. These matters are also handled by Peter Månsson.

Accounting

Salén Energy keeps the books for nearly 20 companies.

The number of transactions flowing through our departments is relatively small, but requires a thorough knowledge of the agreements relating to each project.

Some of the accounting is handled in the foreign subsidiaries but the accounts of all the companies have to be consolidated in the parent company, Salén Energy.

Gunilla Jonsson, senior accountant, and Lotta Björkström, assistant senior accountant, are responsible for accounting for the group, the annual accounts, budgeting, cash flow result analysis, etc.

Since Salén Energy acts as "operator" for its partners in the drilling rigs, Gunilla Jonsson and Lotta Björkström also supply the rig owners budgets for each rig, financial reports and other information.

Bengt Norberg is in charge of invoices, payments, and many other matters.

Salén Energy also handles the accounting for other companies outside the group involved in exploration and drilling, including Largus Exploration AB.

Support

As in all companies, the above activities would come to nothing were it not for the invaluable services of our secretaries. The main work for the Financial Department is performed by Kirsti Häcki, and for the Legal Department by Lilian Fredman.

Salén Energy's
Financial and Legal Departments

Salén Energy i

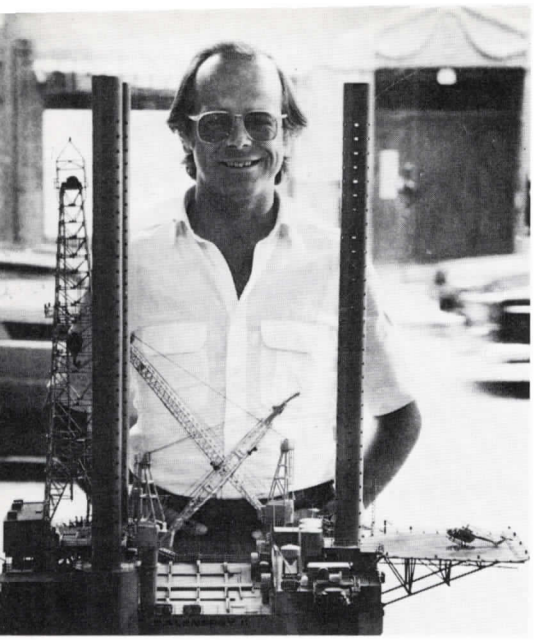


Photo: Ragnhild Haarstad

Henric Ankarcrona, VD Salén Energy Minska konjunkturberoendet och sprida riskerna

Salén Energys utveckling sedan det förra temanumret "Focus on Salén Energy" för knappt två år sedan har skett enligt de linjer som Henric Ankarcrona då drog upp – expansion inom handel och service.

– Genom att expandera på handelssidan vill vi minska Salén Energys konjunkturberoende, säger HA.

Satsningen på offshore service genom SOMUS i Aberdeen är ett annat sätt att sprida riskerna genom att gå längre fram i oljeindustrins produktionskedja.

Inför 1984 hade Salén Energy beslutat att inte starta några nya verksamheter. Så har inte heller skett men nya grepp på gamla verksamheter har prövats genom bildandet av Largus Exploration. Vidare har Salén Energy avslutat samarbetet med Protexa i Houston och fortsätter på egen hand under namnet Salén Offshore Company.

Resultatmässigt blir 1984 ett mellanår. Borrningarna i Turkiet, Filippinerna och missräkningar med Hamilton Brothers prospekteringsprogram i USA har frestat på ekonomin.

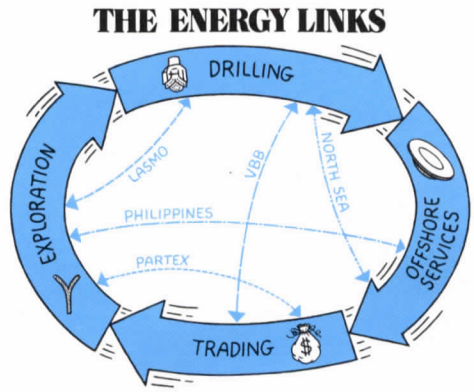
– Dessutom har vi trots långa förmånliga kontrakt, som klarat oss över botten av borrmarknaden, ändå drabbats av marknadens försvagning, säger HA. Men då ska vi också komma ihåg att Salén Energy är den enhet inom Saléns som tjänat mest pengar i absoluta tal under de senaste åren.

Ett dåligt 1984 förändrar inte HAs optimistiska syn på framtiden och Salén Energys intentioner att lägga en god grund för en lönsam fortsättning.

– En förbättrad riggmarknad, en uppgång för oljehandeln och lönsamhet för SOMUS bör ge åtminstone ett nollresultat 1985, tror HA. Genom mindre andelar i framtida borrhål vill vi också minska riskerna.

– Med egna idéer och lite egna pengar kombinerat med mer av andras pengar kan vi göra intressanta affärer. Vi har många goda partners, som vi sätter stort värde på, säger HA.

Den samlade kunskapen hos Salén Energys olika bolag samt partners ger naturliga följdeffekter i nya projekt eller i nya former av samarbete. Man kan uttrycka det som att 1+1>2 eller med termen *synergi*. (Se illustration nedan.)



Men inte ens i oljeindustrin med investeringar på 10-tals eller 100-tals miljoner USD kan det gå vägen om man inte lägger största vikten vid resursen – människor.

– Rätt människa kan lära sig vad som helst, säger HA. Men omdöme, samarbetsförmåga och mänsklig värme är svårare att lära sig. Det är inneboende egenskaper.

Med sina samlade resurser i form av personal, partners och idéer är Salén Energy på god väg att placera Sverige – landet utan oljetraditioner – på oljeindustrins karta.

– Vi skapar traditionen nu. Salén Energy har en välmeriterad tradition av 10 år vid det här laget. Det är en god grund för framtida verksamhet, slutar HA.

Prospektering

Den råvara som produceras i störst mängd är råolja – 2,6 miljarder ton per år motsvarande över 550 miljoner dollar. Naturgas med en produktion på över 1 miljard ton gör hela branschen ännu större. Dessa mängder skall ersättas och därför sker oljeprospektering över hela världen. Produktionen inleddes på land men en allt större andel, nu 27 procent, erhålls till havs.

I oljebranschen ingår allt från världens största företag till enskilda personer med en oljekälla, som ger ett fat per dygn. Kring oljebolagen grupperar sig sedan service- och konsultföretag för alla slags tjänster, t ex borrning, geologiska undersökningar, reservoaruppskattningar.

I denna mångskiftande verksamhet måste varje företag söka finna sin rätta plats. Salén Energys prospektering har utförts till havs där seismiska undersökningar är lättare och möjligheter finns till stora fynd. Om ett område, som inte tidigare uppmärksammats, visas ha goda förutsättningar för fynd, kan stora oljebolag intresseras för att förvärva en andel. Salén Energy har flera gånger lyckats med sådana affärer och kunnat genomföra prospektering till låg egen kostnad.

I **Filippinerna** deltar Salén Energy i ett 7 500 km^2 stort område, där under våren 1984 det andra borrhål utfördes som innehåller gas och kondensat. Stora mängder fordras för en ekonomisk produktion. Loggningsresultat antyder dock stora gasförekomster i porös sandsten. Produktion av kondensat, ammoniak eller metanol från naturgas eller flytande naturgas för export kan därför vara möjlig. En förnyad bearbetning av seismiska data pågår. Därefter kan ett nytt borrhål bli aktuellt för att bekräfta produktionsmöjligheterna.

Den kalksten, som är oljeförande i Mellersta Östern förutsättes även sträcka sig in i den nordöstra delen av Medelhavet i **Turkiet.** Men den täcks av en hård och svårborrad bergart av vulkaniskt ursprung. Saléns har prospekterat i området sedan 1979.

Efter borrning av Birten-1 bedöms nu kalkstenen ligga på 15 000–17 000 fots (4 500–5 000 m) djup. Nu bearbetas tidigare insamlade seismiska data för en säkrare kartläggning av kalkstenen. Därefter uppgörs ett program för borrning till dessa. Borrning kan därefter ske under 1985.

I **Portugal** har Salén Energy en del i ett koncessionsområde på 2 000 km^2 av kontinentalsockeln. Under den första tvåårsperioden har seismik utförts och några borrvärda strukturer kartlagts. I september skall deltagarna bestämma om de förlänger kontraktet med ett år genom åtagande om borrning.

Dessa projekt kompletteras av en andel i **Hamilton Brothers** prospekteringsprogram. Detta koncenteras till Nordamerika och borrning på land. Hittills har vi deltagit i 60 borrningar, av vilka ungefär en tredjedel gett fynd och andel i produktion av gas och olja. Ännu återstår åtskilliga borrningar under 1984 och 1985 varefter produktionsintäkterna inflyter under 10–15 år.

Prospektering måste drivas uthålligt under åtskilliga år för att kunna ge stora fynd med betydande vinster i förhållande till insatsen. Ingen annan verksamhet kan ge så stor avkastning om man lyckas få andel i oljeförande områden och deltar ända till det stora fyndet.

sammandrag

Largus

Largus bildades i februari 1984 genom ett "private placement" med svenska delägare.

Företaget har andel i Salén Energys prospekteringsprojekt i Filippinerna, Turkiet och Portugal samt i Hamilton Brothers program.

Förutom dessa projekt kan Largus i framtiden komma att investera i andra prospekteringsprojekt i samarbete med, eller fristående från Salén Energy.

Salén Offshore Co, Houston

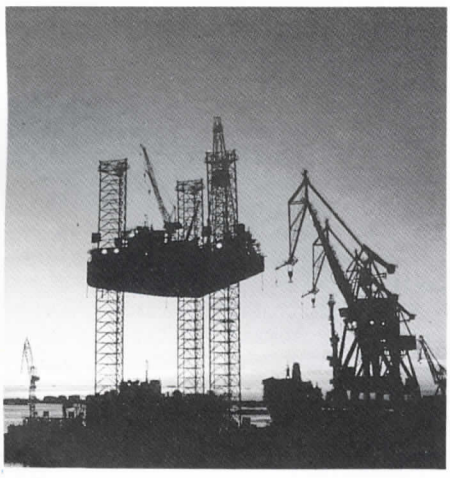
Saléns har opererat oljeborrplattformar sedan 1976 genom det helägda dotterbolaget Salén Offshore Co beläget i Houston, Texas.

Under denna jämförelsevis korta period har Salén Offshore utvecklat en gedigen kunskap när det gäller säkerhet, utrustning och personalutveckling.

Idag opererar Salén Offshore tre jack-up riggar, Salénergy I, V, VI samt plattformriggen Salenergy III. Riggarna har arbetat framför allt i Mexikanska golfen i USA men också i Östra Kanada samt i Brasilien. Bland kunderna finns Exxon, Mobil, Arco, Transco och flera andra oljebolag.

Salén Offshore har en mycket hög säkerhetsstandard på riggarna och har vunnit ett flertal utmärkelser för detta.

Säkerhet och bra utrustning tillsammans med en kompetent personal har givit företaget ett gott rykte i branschen och gör framtidsutsikterna goda.



Brandbekämpning ombord på riggarna

De flesta borrningsföretag som arbetar offshore ger sina anställda den viktiga utbildningen i brandskydd på land. Salén Offshore arbetar efter en ny metod, att ha övningar ombord på riggarna, vilket har visat sig vara mer effektivt.

Hela riggbesättningen får träning på den speciella brandbekämpningsutrustning som hör till den rigg de arbetar på.

De flesta bränder på riggarna beror på vårdslöshet. Att ha brandövningar offshore innebär en mer konkret träning i att bekämpa bränder innan de hunnit få alltför stor utbredning.

Marknaden för borrplattformar

I början av 1982 försämrades marknaden för borrplattformar kraftigt, vilket framför allt berodde på en försämrad konjunktur som bl a ledde till sjunkande energipriser samt gasöverskott i USA. Botten nåddes under sommaren 1983, varefter sysselsättningsgraden för samtliga riggar långsamt ökat från 75 procent i augusti 1983 till 84 procent idag.

Marknaden har förbättrats väsentligt under de sista året i de viktigaste marknaderna för jack-ups och semisubmersibles i Mexikanska Golfen och Nordsjön och förväntas stiga ytterligare.

I USA beror förbättringen framför allt på de stora leaseförsäljningar som ägt rum i Mexicanska Golfen under 1983 och 1984. Sysselsättningen för jack-ups är idag 86 procent i området med 149 enheter i arbete, vilket kan jämföras med 130 enheter i arbete när marknaden var som bäst under slutet av 1981. Antalet semisubmersibles under kontrakt har mer än fördubblats sedan augusti 1983.

I Nordsjön har marknaden för framför allt jack-ups stigit kraftigt sedan 1982. Idag närmar sig sysselsättningsgraden för både jack-ups och semisubmersibles 100 procent.

Antalet jack-ups i området har fördubblats under de senaste två åren beroende på ökad aktivitet i södra Nordsjön, i Holland och Storbritannien.

Alla tecken tyder på en ytterligare förbättring av borrmarknaden i Mexikanska Golfen och i Nordsjön. Även i Sydostasien och Västafrika har en viss stabilisering av marknaden noterats.

Balans i riggmarknaden kan uppstå under 1985/86. Ett nytt överskott på riggar efter 1986 p g a den stora kapaciteten som finns hos varven är en faktor som man inte kan bortse ifrån. Vi tror dock att beslut om nyinvesteringar kommer att baseras på mycket noggranna överväganden om den framtida marknaden.

Salén Energys marknadsarm i London

Salén Offshore Services, UK, vid Grosvenor Place i London har sedan maj 1983 varit en marknadsarm i London för Salén Energys samtliga rörelsegrenar. Dag Sundén-Cullberg arbetar här i nära samarbete med Salénias dotterbolag Exxtor.

I London ska Dag Sundén-Cullberg upprätthålla en kontinuerlig kontakt med kunder och myndigheter. Här kan han nå i stort sett alla Salén Energys potentiella kunder.

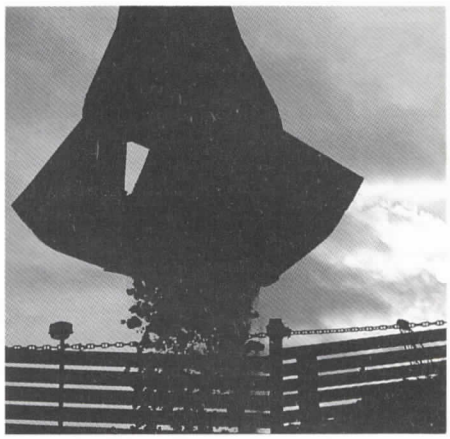
Salén Offshore Services är tillsammans med SOMUS i Aberdeen också de första stegen för Salén Energy att komma närmare Europa d v s in på nordsjömarknaden. Beställningen av en ny jack-up rigg kan bli nästa steg mot Nordsjön. Inför den beställningen har londonkontoret stått till tjänst med omfattande marknadsanalyser.

Dag Sundén-Cullberg kan också agera som konsult och mäklare för andra bolag inom branschen, framför allt när det gäller riggar och supplybåtar, som är hans speciella kompetensområde.

På kontoret finns också sekreteraren Annette Lay.

Om den nya jack-up riggen blir verklighet, måste operationsbolag bildas för drift och marknadsföring av den nya riggen och Salén Energys londonkontor kommer att expandera.

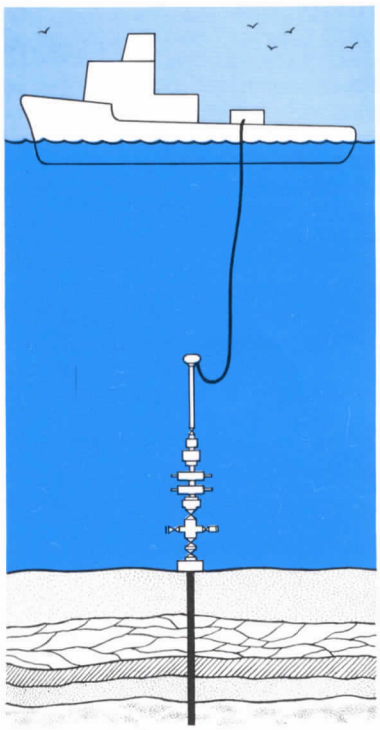
Salén Energy i sammandrag, forts ...



Kostnadsmedveten oljeproduktion till havs

SOMUS som bildades i april 1983 är ett samarbete mellan Salén Energy och det brittiska bolaget Oceanus Ltd.

Företaget erbjuder konsult- och entreprenörstjänster i samband med oljepro-



duktion till havs. Den största erfarenheten har man av flytande produktion av olja och gas i mindre oljefält.

VD är Bob Cockrill som arbetat i offshoreindustrin sedan 1968.

Affärsidén är att erbjuda metoder för att göra oljeproduktion till havs så kostnadseffektiv som möjligt.

Ett exempel är "Extended well testing", en metod för att testa oljemängderna i ett borrhål under en tremånadersperiod och samtidigt producera olja på ett billigt sätt.

SOMUS Well Services är ett företag som ägs av SOMUS samt Salén Energy. Jim Graser som har 30 års erfarenhet i oljebranschen är VD. Företaget är baserat på en av Jim Grasers idéer – en "Subsea wirelining winch unit". Detta är ett system för att utföra reparationsarbeten i ett borrhål beläget på djupt vatten från ett dykerifartyg, vilket är billigare än med konventionell teknik.

En av S&Ws offshoresatsningar "The complete system"

Detection Instruments Group Limited är sedan 1 juli 1984 en ny företagsbildning, bestående av Detection Instruments Ltd, Salén Ditech Ltd och Salwico Marine i Storbritannien. Tre företag som köptes av Salén & Wicander för tre år sedan.

Detection Instruments Group konstruerar, tillverkar och marknadsför brand- och gasvarningssystem samt släckningsutrustning.

Genom sitt engelska dotterbolag satsar Salén & Wicander framför allt på oljeindustrin till lands och till sjöss. En satsning som är ett naturligt steg vidare för ett företag som redan dominerar marknaden för brandskydd ombord i fartyg.

Företaget tillverkar delar av och marknadsför ett komplett alarm-kontroll-släckningssystem – "The complete system".

Omsättningen på offshoresidan uppgick 1983 till ca 2 miljoner pund. Ungefär hälften säljs på export från Storbritannien.

Enligt VD Göran Colldahl är Indien den marknad som för närvarande har den största potentialen. Till Indien levererar Detection Instruments Group bl a gasvarningssystem till anläggningar för fyllning av gasflaskor för hushåll. Avsikten är att fördjupa samarbetet genom att starta lokal tillverkning.

Bland kunderna på offshore-sidan märks Amoco, BP, Esso, Mobil, Marathon Oil, Phillips Petroleum, Pertamina, Shell, Statoil och Total Oil.

Genom fusionen av de tre brittiska bolagen hoppas man bli än slagkraftigare på exportmarknaden.

Handelsrörelsen expanderar

Salén Energys handelsverksamhet är baserad på synergieffekter inom Saléngruppen.

Salén Coal köptes 1982 mot bakgrund av kolets ökande betydelse som energikälla. Dessutom hade Salén Dry Cargo en gedigen erfarenhet av kolbefraktning, Siwertells lossningssystem används i flera kolhamnar och Saltech kan erbjuda konsulttjänster inom design av kolhamnar. Tillsammans innebär detta att Saléns kan erbjuda tjänster inom hela kolkedjan från producent till konsument. VD för Salén Coal sedan 1 augusti 1984 är Anders Forssell.

Salén Oil bildades under 1983 av Saléns bunkeravdelning. Salén Oil köper årligen ca 1 miljon ton bunkerolja till Salénflottan vilket utgör en bra bas att utveckla en handelsverksamhet från. Ansvarig för den dagliga operationen är Urban Cederborg.

Salén Resources i New York som är en joint venture mellan Salén Energy och Salén Dry Cargo är engagerat i den internationella marknaden för kol och andra fasta bränslen. Ansvarig för verksamheten är Mel Diamond.

Salén Energy – Ekonomi och juridik

Salén Energy är inte *ett* företag utan en grupp som består av ett ganska stort antal företag.

Gruppen, vars verksamhet till största delen sker utanför Sverige, förändras ständigt. Varje nytt projekt ställer krav på individuella juridiska och finansiella lösningar.

Anders Ljunggren är ekonomichef och ansvarar för finansierings- och skattefrågor. När det gäller frågor om bolagsstruktur har han ett nära samarbete med Clas Regeheim, bolagsjurist.

Clas Regeheim har det övergripande juridiska ansvaret för gruppen.

Biträdande ekonomichef är Peter Månsson som framför allt arbetar med ekonomiska frågor kring Salén Energys prospektering.

Ansvariga för Salén Energy-gruppens redovisning, bokslut och resultatanalyser är Gunilla Jonsson och Lotta Björkström.

Betalningar och fakturering sköts av Bengt Norberg. Sekreterare för ekonomi och juridik är Kirsti Häcki och Lilian Fredman.

DEPARTMENT OF TRANSPORTATION

UNITED STATES COAST GUARD

Public Service Commendation

IN RECOGNITION *of notable services which have assisted greatly in furthering the aims and functions of the Coast Guard*

This certificate is awarded to

SALEN OFFSHORE CO.

Executed this 10TH *day of* JULY, 1984

at NEW ORLEANS, LOUISIANA

Photo: Per-Olow

REDAKTÖREN

Dear Readers,

As you must have noticed, this is no ordinary issue of *Salén-Nytt.* But we've only temporarily placed Salén Energy's new logo on the front cover. It's fitting that this should adorn the cover since this issue is completely devoted to Salén Energy's diversified activities.

This issue of *Salén-Nytt* wasn't really in the cards. It had been suspended due to the wave of economy sweeping through Salén. But when regular operations don't develop quite as they should, one can always start trading. That's what Salén Energy does. I did too. I sold this issue to them. Anyhow, they felt the need to publicize their trading activities.

Now you're obviously wondering what I'm going to say about Salén Energy. The company's operations are probably a little unreal, incomprehensible and fantastic both for you and for me. Located in Stockholm, Sweden—a country with no oil industry of its own—the company operates large drilling rigs in the Gulf of Mexico and explores for oil off the Philippines. At the same time, it has ventured into trading and service operations. Suddenly it has spawned a whole lot of small companies, each with a big idea to realize in the depths of the oceans.

Drilling platforms must seem unreal to those of us who wear out office chairs for a living and who have never seen rigs in real life. But they must exist. I've seen photos. They've also figured in Salén's income statements in recent years. Money kept flowing in from them as long as the favorable long-term contracts fixed during the boom in the drilling market lasted.

But, what I *have* seen in real life are Salén Energy's personnel in Stockholm. A competent lot with a wonderful sense of self-esteem. The type of people I imagine really didn't need to attend the "Mind and Body" course. To me, viewing the company a little from the outside, they all appear to be strong personalities. Salén Energy hasn't shaped them by dipping them in its own mold.

Sometimes I feel that when you see people wandering into the dining hall, you can tell at a distance whether they are Reefer, Tanker or Dry Cargo folk. For Salén Energy, it's not quite as easy. They are a natural mix of people in suits and bow ties as well as jeans or even jeans skirts.

Integrity is the motto of all of them, not least the president, Henric Ankarcrona. Possibly, since Salén Energy needed experts in widely differing fields from the start, they have learned to respect each other. Some of Salén Energy's operations demand expertise of a kind which can't be found anywhere else in the house.

But that's not all. Qualities of good judgment and human warmth are rated highly in people looking for employment at Salén Energy. All other attributes can be picked up, according to Mr. Ankarcrona.

I used to think the oil industry was one of the toughest. But daring to be yourself is probably still the toughest thing of all. And that's when we do our best.

Margareta Dahlstedt

Kära läsare,

Som du redan märkt är detta inget vanligt Salén-Nytt. Men vi har bara tillfälligt placerat Salén Energys nya logo på omslaget. Den får pryda omslaget eftersom detta nummer helt och hållet ägnas Salén Energys mångskiftande verksamheter.

Egentligen är numret indraget i den allmänna sparivern på Saléns. Men när den ordinarie verksamheten inte utvecklas riktigt som man tänkt sig, så kan man ju alltid börja "trada". Det gör Salén Energy. Så jag sålde numret till dem, eftersom de ändå hade behov att informera om sin "trading".

Nu undrar du förstås vad jag ska sitta här och tycka om Salén Energy. Deras verksamhet är antagligen lika overklig, ogripbar och fantastisk för dig som för mig. Ett företag på Norrlandsgatan i Stockholm i Sverige – som inte har någon egen oljeindustri – som opererar stora borriggar i Mexikanska Gulfen och letar efter olja utanför Filippinerna. Samtidigt har dom som sagt börjat "trada" och "serva". Plötsligt finns där en del små bolag med stora idéer att förverkliga i havets djup.

Overkligt är det för oss som nöter kontorsstolar och aldrig har sett en borrplattform i sinnevärlden. Men uppenbarligen finns dom. Det har jag sett på bild. Och dessutom har det synts i Salén Energys resultaträkningar de senaste åren. "Kulorna" har strömmat in så länge de fördelaktiga långtidskontrakten från borrmarknadens högkonjunktur varade.

Vad jag däremot sett i verkligheten är Salén Energys personal i Stockholm. Duktiga människor med en förunderlig självkänsla. Sådan som jag inbillar mig egentligen inte behövde gå Mind & Body-kursen. För mig som ser företaget lite utifrån framstår alla som starka personligheter. Det är inte Salén Energy som har format dem – stöpt dem i sin form.

Ibland tycker jag att det syns på långt håll om det är en kyl-, tank- eller torrlastmänniska som smiter in i matsalen.

Men för Salén Energys folk kan jag inte hitta någon etikett. Där går det lika bra med kostym och fluga som med jeans eller t o m jeanskjol.

För alla, inte minst för VD Henric Ankarcrona, är integritet ett honnörsord. Kanske är det så att Salén Energys behov av så vitt skilda kunskaper från början lärt människor att respektera varandra. Det ryms en del verksamheter inom Salén Energy som kräver kompetens, som inte finns någon annanstans i huset.

Men det är nog inte bara det. Omdöme och mänsklig värme är egenskaper som ger bra meriter för att få anställning på Salén Energy. Allt annat kan man lära sig, säger Henric Ankarcrona.

Jag som trodde att oljebranschen var en av de tuffaste. Men tuffast av allt är nog ändå att våga vara sig själv. Då gör man också det bästa jobbet.

Margareta Dahlstedt

MASSKORSBAND

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The Salén Group is one of Scandinavia's largest shipping enterprises. The Salén fleet consists of some 175 vessels engaged in worldwide trade. These ships range from bulk carriers, reefers and tankers to passenger and ro-ro ferries. Group operations are managed by the following companies:

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Production and marketing of continuous ship unloaders

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