

# THE DAQING OIL FIELD: A MODEL IN CHINA'S STRUGGLE FOR RAPID INDUSTRIALIZATION

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**I**N 1964, Mao Zedong declared the Daqing oil field a model for China's industrialization. For a long time thereafter, few specifics concerning the oil field were made public, but in the spring of 1977, after Hua Guofeng's emergence as premier, the National Conference on Learning from Daqing in Industry was held, and more detailed reports about the oil field began to appear.

This article reviews the history and development of Daqing based on a reading of Chinese language newspapers, magazines, and books, the reports of foreign visitors to China, and observations from the author's own visit to the site in November 1976.<sup>1</sup> However, with the exception of two Chinese books published in 1979 [11] [6], from 1978 to the present, few noteworthy reports have been publicized.

At the beginning of 1978, China unveiled its Ten-Year Plan for Economic Modernization. The plan called for importing advanced technology from the capitalist nations and for studying capitalist management techniques. Consequently, Daqing as a model for development seems to have dropped from sight. In early 1979, however, the Central Committee of the Chinese Communist Party (CCP) came to the realization that two or three years of adjustment would be necessary before China was ready to adapt foreign methods of production and management to Chinese conditions. Discussion of the prerequisites for modernization centered on the question of the priority to be assigned to agriculture, light industry, and heavy industry, and how the present systems of investment, economic planning and management, and the framework of importing foreign capital should be reorganized. In other words, the party leadership reaffirmed the country's commitment to continue on the "Chinese road to modernization."

The Daqing oil field represents a unique example of totally Chinese-directed industrialization. As emphasis continues to be placed on the "Chinese road to modernization," the Daqing case is one that must be examined closely to understand just how it will serve as a model for China's rapid industrialization. It is with these points in mind that this article was written.

## INTRODUCTION

From April 20 to May 13, 1977, China held the National Conference on Learning from Daqing in Industry. It was the first national conference of its kind to be held in the thirteen years since Mao Zedong, in 1964, first proclaimed

<sup>1</sup> The original version of this article appeared in Japanese in 1977 [14]; this is the full translation of the original text.

“in industry, learn from Daqing.” The importance of the conference was evident to all.

While the theme of the conference was clearly to promote the industrial planning efforts called for by Hua Guofeng’s “Four Modernizations,” the Daqing oil field was presented as a model capable of helping industries establish a concrete schedule for their own modernization. Vice-Premier Yu Qiuli praised the Daqing model because “the Daqing oil field blazed China’s own road of industrial development which is diametrically opposed to capitalism and revisionism” [30, p. 213]. Learning from Daqing in industry and developing Daqing-type enterprises throughout the country, he continued, “is a great revolutionary mass movement on the industrial front for continuing the revolution under the dictatorship of the proletariat with perseverance and achieve greater, faster, better, and more economical results in building socialism” [30, p. 225].

The conference called for converting one-third of China’s industries to the Daqing model by 1980 when the country’s Fifth Five-Year Plan was to be completed. In other words, between 1977 and 1980, China would have to construct some 400 large and medium-sized enterprises on the Daqing model every year [30, pp. 227–28].

At the 1977 conference, goals were set for fiscal year 1977 for all of the provinces, municipalities, autonomous regions, and other relevant administrative units. It was ordered that the names of the industries to be built along Daqing lines be announced publicly and published in the newspapers, that their progress be evaluated each year in order to plan for the following year, and that a report be filed at least once a year with the Central Committee on the state of the movement and the experiences of each enterprise [30, pp. 227–28].

What exactly was meant by a Daqing-type industry? In answer to that question, six points were emphasized.

- (1) it should make a conscientious study of Marxism-Leninism-Mao Zedong Thought and adhere to the party’s basic line and the socialist orientation in running the enterprise; (2) it should establish a core of party leadership based on the three-in-one combination of the old, middle-aged and young that firmly carries out the party’s line, principles and policies, maintains close ties with the masses and is united in struggle; (3) it should train a contingent of workers which is capable of fighting hard battles in the three great revolutionary movements of class struggle, the struggle for production and scientific experiment and which is imbued with the revolutionary style of being honest in thought, word and deed and setting itself strict standards for work, organization, attitude and observance of discipline; (4) it should adhere to the principle of cadre participation in productive labor and worker participation in management, reform of irrational and outdated rules and regulations and close cooperation among cadres, workers and technicians, and institute scientific rules and regulations for management which rely on the masses and meet the need for expanding production; (5) it should constantly make new achievements in technical innovations and technical revolution, fulfil state targets in an all-round way and reach the advanced national levels in major technical and economic indices; (6) it should keep to the “May 7th” road, that is, while mainly engaging in industrial activity, the workers also do other things and, where conditions permit, do a good

job of farming, forestry, animal husbandry, side-occupations and fisheries, and make good arrangements for the workers' everyday life while improving production. [30, p. 227]

For most industries, adhering to these six points and reorganizing their operations accordingly was no easy matter. Moreover, some very basic problems had to be solved before Daqing-inspired models of production could be generalized. Many problems stemming from the Gang of Four, which had wrecked national economic planning and the system of industrial management, had to be solved, and production systems had to be reorganized to attain the minimum standards set for socialistic industries.

On October 23, 1977, Vice-Premier Yu Qiuli presented a report entitled "Current Conditions in the Development of Our National Economy" [31] to the Standing Committee of the National People's Congress. According to his report, due to the sabotage of the planned economy by the Gang of Four, for the past several years, China's economy had been "half planned and half free of government control." Furthermore, according to the report, the reorganization of enterprises had been undertaken in accordance with the six points constituting minimum requisites in terms of socialist planning, and at present, special emphasis was placed only on major enterprises vital to the national economy. Yu thought two more years were still necessary before all sectors of the national economy could be brought under the plan. From the above statement, it is evident that the construction of Daqing-style industries had to take place concurrently with the reorganization of each enterprise; the Daqing model was practicable solely on the basis of restructured industries.

Thus, in only a few years time, China was going to restructure its industrial enterprises along the lines of Daqing. The Daqing model would be emulated widely and would ultimately become one of the basic features of Chinese socialism. Clarification of the Daqing-type model, its history, and its current state will therefore provide some very important clues for understanding the economy and the prospects of Chinese socialism. This article will first discuss the current situation of the Daqing oil field, both in terms of production and organization. Secondly, it will consider several problems related to the development of Daqing in an effort to ascertain the importance of the development of the oil field to Chinese socialism.

## I. THE CURRENT STATE OF THE DAQING OIL FIELD

### A. *Ten Major Contributions of Daqing*

On March 13, 1977, just prior to the opening of the National Conference on Learning from Daqing in Industry, the New China News Agency released a report entitled "The Ten Major Contributions of the Daqing Oil Field" [24]. The main points of that report are as follows:

1. ... Using invincible Mao Zedong Thought as their weapon, China's petroleum workers found a big oil field at Daqing, ... exploding the fallacy that China is oil

poor, refining China's theory of oil formations and building China's largest oil base, big even by world standards.

2. Daqing has maintained [for 17 years] an average annual increase of 28 per cent for crude oil output. . . . Daqing's output today is six times what it was in 1965, the year preceding the Great Proletarian Cultural Revolution.

3. Daqing enables China to export crude oil and oil products. . . . China has since 1973 exported oil to Third World countries and capitalist countries. . . . Last year [in 1976], China exported oil and oil products to more than 40 countries and regions of the world.

4. Oil field management has reached a fairly high level. Production has remained high and stable over the past 17 years. The crude oil extraction percentage . . . [is] 15 per cent above the designed figure. This is equivalent to opening another big oil field.

5. A large petrochemical works and a big chemical fertilizer plant have been put up to ensure multi-utilization. . . . The amount of oil refined rose to double the designed capacity in five years. . . . The plant's annual output of urea is equivalent to one million tons of standard chemical fertilizer. . . .

6. Constant new successes have been made in scientific experiments and technical innovations. . . . the cadres, workers and technicians have in the past 17 years introduced more than 29,000 scientific research items and technical innovations, including 510 major ones and over 50 up to advanced world levels.

7. The Daqing oil field has accumulated considerable funds for the state. In the past 17 years it has turned over to the state more than 14 times the total state investment for construction in the same period. The amount in 1976 was enough to build nearly two big oil fields and [one] petrochemical work like Daqing.

8. . . . The masses of workers and their family members have thus transformed a wildness into a new socialist oil field. . . . and carrying out the principle for building the oil field put forward by Premier Zhou Enlai. This means integrating industry and farming as well as town and country, benefiting both production and the people's welfare. In the past 17 years, the area harvested 300,000 tons of grain and 400,000 tons of vegetables. That means that the family members of the oil workers, totalling 55,000, have not relied on the state for grain supply for 12 consecutive years. . . .

9. A number of new achievements have been made in prospecting. Over the past few years geological prospecting around Daqing and within the oil field have revealed more oil and natural gas for industrial use in some formations and verified the deposits of several oil fields.

10. Great efforts have been made to help open up and build other new oil fields. Since 1963 Daqing has sent 56,000 cadres and workers and 4,900 pieces of machinery, more than one third of its equipment, to other oil fields to help develop China's petroleum industry at high speed. [24, pp. 15-17].

## B. *Changes in Oil Production*

Many of China's oil production figures have never been made public. Among the officially unconfirmed statistics was the figure of 10 million tons for 1965 mentioned by Premier Zhou Enlai to Edgar Snow [20]. In January 1974, Zhou also told the then Japanese Foreign Minister Ōhira that in 1973 China produced 50 million tons of oil [18]. Since figures for the Daqing oil field have never been made public, its actual production record remains unknown.

TABLE I  
CHINA'S OIL PRODUCTION

Year	Nationwide (A)		Daqing (B)		B/A (%)
	10,000 Tons	As Compared to the Previous Year (%)	10,000 Tons	As Compared to the Previous Year (%)	
1960	550		40		7
1961	530	-4	—		
1962	580	9	—		
1963	640	10	230		36
1964	870	36	—		
1965	1,080	24	400		37
1966	1,390	29	510	28	37
1967	1,390	0	—		
1968	1,520	9	540		36
1969	2,030	34	740	37	36
1970	2,850	40	1,000	35	35
1971	3,670	29	1,260	26	34
1972	4,300	17	1,440	14	33
1973	5,450	27	1,590	10	29
1974	6,530	20	1,940	22	30
	(6,580)				
1975	(7,450)	13	—		
1976	(8,450)	13	2,400		28

Sources: Figures up to 1974 are taken from U.S., Congress, Joint Economic Committee, *China: A Reassessment of the Economy*, July 10, 1975. Figures in parentheses are taken from [1].

Note: Figures for Daqing's production in 1976 were derived by taking the 1965 figures and multiplying them by six.

However, since China has sometimes made percentage comparisons of production for selected periods, or compared later production with pre-Cultural Revolution production (pre-1965 figures), it is possible to make a rough estimate of its oil output. Table I is taken from a report of the United States Congress, and it is felt that the figures given are close to actual values. It shows that Daqing's production in 1970 was 10 million tons, accounting for 35 per cent of China's oil production for that year.

More recently, the British Journal *Petroleum Economist* in its July 1977 issue reported that China's total oil production for 1976 was 87 million tons of which 40 million came from Daqing [19]. If true, this means that Daqing is producing 46 per cent of the nation's oil. Another source puts total oil production for 1976 at 90 million tons of which 50 million, or 56 per cent of the total, was produced at Daqing [29]. Since Table I indicates that in 1976 Daqing was producing 28 per cent of the nation's oil, the *Petroleum Economist* report would indicate a great leap in production. If Daqing is indeed producing almost one-half of all of China's oil, then the U.S. Congressional report, which cites a 1970 production figure of 10 million tons, is excessively low. Unfortunately, there is at present no way of establishing which of the two figures is the more accurate.

From the information given in Table I, the following points may be adduced. (1) Most of the increase in oil production which took place in the first part of the 1960s was due to the development of the Daqing oil field. (2) Between 1969 and 1971, the development of Daqing and of national oil production was especially rapid. (3) At Daqing, 22 per cent of the total increase in production took place in 1974. (4) Between 1975 and 1976, China's total oil output increased only by about 10 per cent.

### C. *The Big Battle Formula*

Daqing's increase in production was due to the exploitation of new oil resources found as a result of the big battle formula. Daqing was named to commemorate the tenth anniversary celebration of China's national liberation held on October 1, 1959, after its first well began to produce oil on September 26, 1959.<sup>2</sup> In February 1960, the Central Committee of the CCP decided to launch a "big battle for oil," and for that purpose assigned nearly 100,000 workers, military men, experts, and cadres to the project. It was at this time that the Iron Man Wang Jinxi came to Daqing leading the 1205 Drilling Team from Yumen [26].

The big battle campaign was an attempt to apply Chinese military thinking to the development of the economy. In 1960, a year of economic recession, a measure that required little new investment was sought, and a formula for mobilizing people and equipment all over China to wage an all-out war for development was adopted. Later, this style of campaign was applied with good results to the discovery of petroleum deposits and the development of new oil fields.

Daqing emerged from this big battle in 1963 as one of the nation's largest oil fields. The Daqing oil field is divided into five sections (north, south, east, west, and center), and at 25,000 square kilometers, it is as large as the Japanese island of Shikoku. The central and southern sections were the first to be developed, and in 1973 a big battle was launched to develop the northern section. In the northern section, the oil lies under a high-pressure gas cap, and there seem to be several gas-bearing layers [23]. Following a January 1974 directive from the Central Committee, the CCP Daqing Committee threw 23,000 people into the "frontline" under the leadership of the Frontline Headquarters, and well-drilling was begun in April. Ninety-eight days later, oil was reached, although the presence of gas deposits meant that an additional two years were necessary before the northern section could be readied for full production. The new section was reported to produce as much oil as the Daqing oil production in 1965 [8]. This accounted for the 1974 production increase of 22 per cent registered by the entire Daqing oil field.

Daqing helped develop the Shengli, Dagang, and other oil fields by providing men and materials. In some cases, the 1205 and 1202 drilling teams spent nearly a year working in the big battles conducted on other oil fields [13, pp. 220-36].

<sup>2</sup> This is the explanation given by Mr. Wei Kun, vice-chairman of the Daqing Reception Office, to the author on November 29, 1976.

After January 1, 1960, Daqing shipped oil out by rail, and at the end of 1970, construction was begun on a pipeline. On September 30, 1973, work was completed on a 1,152 kilometer heated pipeline which ran from Daqing to Qinhuangdao. On September 30, 1974, an auxiliary pipeline reaching as far as Tieling in Liaoning Province was built. At present, the pipeline extends to Beijing [16, 1974-78 editions].

#### D. *Organization*

As can be seen from Figure 1, the Daqing oil field is organized as if it were a large commune in which industry, agriculture, commerce, schools, and even the people's militia play a role.<sup>3</sup> The total population of the oil field is 500,000. About 100,000 are workers and officials connected with oil operations, while 60,000 workers and officials are directly concerned with extracting the oil and processing it.

In addition to its exploration department, Daqing has a drilling department, an oil extraction department, an oil refinery, and a chemical fertilizer plant run on natural gas. There are also various research institutes and schools. A point of special interest is the people's communes, which had been set up before the oil field began production, and the family production teams which are organized with the wives who carry out collective agricultural work in the fields.

Related to all of these is the Daqing Oil Field Revolutionary Committee which is directed by the CCP Daqing Committee. Directives are also received from the central government's Ministry of Petroleum Industry and from the Heilongjiang Provincial Party Committee.

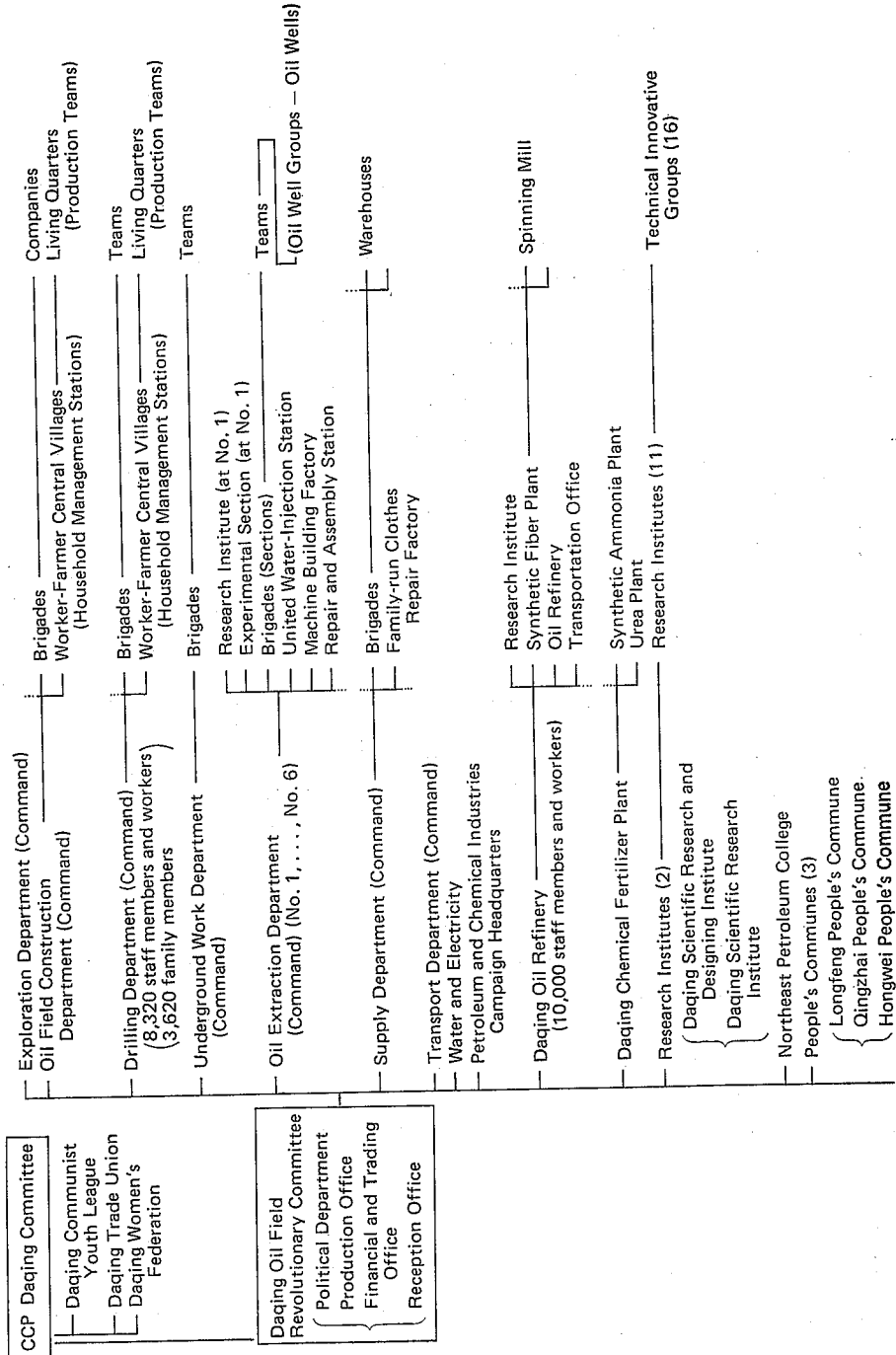
There are also several supervisory bodies which function beneath the Revolutionary Committee. In this category are over twenty-one supervisory departments, plus a number of factories, schools, and institutes which bring the total to forty-three organizations. Beneath these are brigade-level units such as production brigades, factories, and household management stations. Finally, there are the basic-level organizations which consist of workshops, production teams, and living quarters. In all, there are about 2,000 basic-level organizations throughout the Daqing complex in which branches of the CCP have been set up.

Party organizations consist of the Daqing Committee (with its standing committee of fourteen members), party committees organized in the supervisory departments and factories (with a total membership in their standing committees of 314 people), party general branches in brigades, and party branches in each basic-level unit.

The main leadership organs are the Daqing Revolutionary Committee plus the various supervisory departments. These have a total membership of 673 people including party cadres. About 74 per cent of the members of the entire

<sup>3</sup> The following accounts of the organization of the Daqing oil field are from: [13], explanations given to the author during his visit to the Daqing oil field in November 1976, and news reports released by the New China News Agency or appearing in the *Renmin ribao* and other sources.

Fig. 1. Organization of the Daqing Oil Field Revolutionary Committee (as of Early 1977)





supervisory corps above the level of the base organizations are of working class origin.

Concerned with social and cultural aspects are the Northeast Petroleum College, more than 200 elementary and middle schools, over 100 "July 21st" worker's colleges and many after-hours industrial skills classes, and 160 hospitals and health clinics.

**Worker-Farmer Villages**—Under the theme of uniting industry and agriculture and cities and villages in order to benefit both production and people's welfare, over 60 worker-farmer villages and 164 living quarters have been set up. Each village, administered by a household management station, has two to four living quarters. Village members enjoy various facilities including shops and community services such as medical treatment, kindergartens, nurseries, elementary and secondary schools (including high schools), and colleges. In the Daqing oil field, about 95,000 pupils and students attend the elementary, secondary, and college courses offered by the more than 300 schools. About 15,000 middle school graduates have now become members of the 116 intellectual youth worker teams and have participated in agricultural work. After eighteen to twenty-four months of apprenticeship, they are eligible to become workers at Daqing.

The workers and farmers pride themselves on the fact that most services are provided entirely free or at minimal cost. These include rent, water, electricity, fuel, public baths, kindergartens and nurseries (parents pay the cost of meals for their children), schools, movies, buses, and medical care (families pay half of the cost).

Over 40,000 wives are engaged in agriculture and side-line production. About 21,300 hectares have been opened for agriculture. Figures for 1976 show that the production of food grains was 30,000 tons and vegetables 75,000 tons. Moreover, 110,000 hogs, more than 45,000 oxen, horses, sheep, and 100,000 chickens were raised, 4 million fish stocked, 10 million trees planted, and 85 tons of fruit harvested.

From Figure 1, it can be seen that under the jurisdiction of the Oil Field Construction Department and the Drilling Department are several worker-farmer villages (central villages) organized at the brigade level. On the periphery of each central village are a few living quarters which are organically linked to the central village. Living quarters are organized on a basic-unit level. Wives' agricultural production brigades have been organized in each village, and within each living quarters, family production teams have been set up. For example, in one such village belonging to the Oil Field Construction Department, there is a household management station called the First Red Satellite which is responsible for the village agricultural production brigade and a family production team called vanguard no. 5 situated at a living quarter around the village. In agricultural brigades and teams, people work under the principle of collective ownership, and distribution is made according to the number of work points accumulated.

Various other supervisory departments and factories are also supposed to have

both village-level and basic-level organizations, with wives organized for agricultural work.

In addition to wives doing agricultural work and managing various community services, Daqing is also advanced in the area of women performing industrial work. There are many oil extraction teams composed entirely of women, and on March 8, 1974, an all-female well-drilling team was set up; its performance is said to be equal to that of the men's teams.

**The Big Battle Campaign Headquarters**—In carrying out a new basic construction project, a big battle campaign headquarters is set up. At the project site, a frontline headquarters (composed of experts from various departments) is organized to undertake the big battle. One such example is the Petroleum and Chemical Industries Campaign Headquarters shown in Figure 1.

**Family-run Clothes Repair Factory**—This is supervised by the Supply Department. It was organized in December 1960 when three demobilized soldiers and five wives formed a group to repair old clothing. At present, a workshop is staffed for this purpose by 415 officials and workers, although wives predominate. In its seventeen years of operation, the workshop has reworked worn clothing into over 3,500,000 items of worker's attire and protective articles, thereby saving over 920,000 meters of cotton cloth, 455 tons of raw cotton, and over 2 million buttons; through such economies, it is calculated that the team has created a value of over 3,500,000 yuan. The workshop has been praised for its thrift and good taste in producing materials badly needed by the workers.

**Oil Refinery**—After completion of the first Daqing oil refinery in October 1963, the facility produced 1 million tons of oil annually, and after completion of the second project in 1966, it added to its annual capacity 1.5 million tons. After remodelling the facilities (the first project was completed in June 1966 and the second in September 1969), the annual production for each project increased to 2.5 million tons, and a potential capacity of 5 million tons for the entire oil refinery was created. At present, over fifty chemical by-products are produced by the refinery, which has a staff of about 10,000 workers and officials (including 3,000 women).

**The Daqing Chemical Fertilizer Plant**—Because the oil field has extensive natural gas resources that can be used for producing urea, work was begun on a chemical fertilizer plant imported from the United States in May 1974. Construction was completed in the middle of June 1976, and actual production began on July 31, 1976. The average age of workers at the plant is twenty-four years, average wages are set at the level of grade 1.8, and the facility is capable of producing 480,000 tons of urea annually.

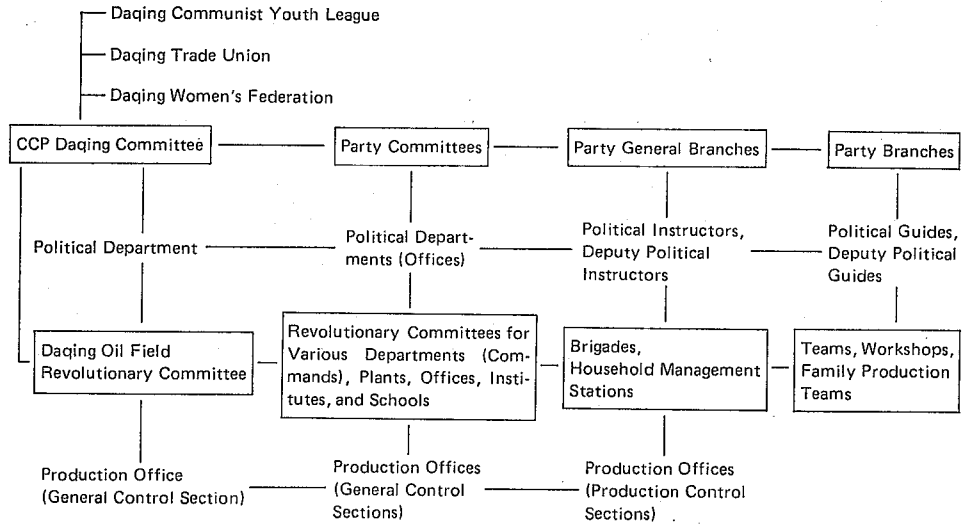
#### E. *Function*

The activities related to political and administrative work at Daqing are outlined in Figure 2.

##### 1. *Political work*

Political work comes under the authority of the Political Department of the

Fig. 2. Political and Industrial Supervisory Organs at Daqing



Daqing Revolutionary Committee and is carried on by political instructors at the brigade level and by political guides at the basic level. According to the CCP Daqing Committee's "Main Points of Political Work of the Daqing Oil Field" as revised in February 1977 [3], the cadres working in political organizations are in general CCP members who act as party agents in the various revolutionary committees.

The role of the Political Department is to carry out various political campaigns under the direction of the Party Committee. It is also responsible for daily activities of the Trade Union, the Women's Federation, and the Communist Youth League. To aid in its political work, the Daqing Political Department publishes a newsletter entitled *Daqing zhanbao* [Battle report from Daqing].

The important targets for political work are the production teams, workshops, family production teams, and other basic-level units. Often the lowest ranking political guide is secretary of a party branch. The team leaders and the political guides run the basic-level units together.

Before beginning work on a project, the political cadres call for a "prewar mobilization," and workers gather to study such things as the current situation, the responsibilities and importance of the jobs to be done, their history and background as well as areas of difficulty and how to cope with problem situations. In the course of these discussions, the leaders prepare concise slogans for the battle ahead.

As regards the actual production process, cadres are responsible for organizing a socialist competition by evaluating workers' ideological attitudes and their contributions at the work site. Cadres are expected to be present at the most difficult work site, must make sure to congratulate good workers and acknowledge good performances, and must be able to answer various questions about ideology.

After the completion of the battle, cadres convene an appraisal meeting where both staff and workers appreciate work results, point out problem areas, and generate enthusiasm for future big battles. Each year a movement is organized to examine the thinking of the workers, to assess their contributions, to evaluate their behavior, and to determine who will be named "standard-bearer." Each year a meeting of advanced workers and advanced units is held to raise and publicize the achievements of model workers and model units. Twice a year evaluations of political work are carried out at Daqing, and each year a political work conference involving the entire oil field is called to set the main goals of future political work.

During the big battle of 1960, the political commissar system was implemented at Daqing. After studying political work in the People's Liberation Army (PLA), the workers of Daqing have made this system an integral part of their organization [30].

## 2. *Oil field operations*

Concerning actual production work, orders pertaining to oil field operations are passed from the Production Office of the Daqing Revolutionary Committee to the production offices in the supervisory departments and from there to the production offices in each brigade.<sup>4</sup> The heart of a production office is its control section which issues orders for daily production quotas and work responsibilities (in Chinese the control section is called *diaodushi*). There is a General Control Section in the Production Office of the Daqing Revolutionary Committee, and there are general control sections in the production offices of each of the eighteen supervisory departments. Each brigade-level production office has a production control section. Appropriate control sections have also been set up in the workshops and schools not under the jurisdiction of the supervisory departments. These control sections are linked by a telephone network which is manned twenty-four hours a day.

The General Control Section has over forty people assigned to it, and over half are dispatched to the site. For example, the frontline headquarters at a new oil field development site might be composed of two control personnel who organize supervisory departments in preparation for the forthcoming big battle.

The General Control Section maintains fourteen log books which record over 330 pieces of statistics, and on a blackboard various key production and construction units for the day are marked to make it easier to understand the situation at a glance. Whenever an accident occurs, cadre staff or control personnel from the General Control Section (at least seven or more of the staff are cadre class) are quickly dispatched to the scene.

In order to quickly solve problems which arise during daily production, the workday begins with a telephone conference of cadres at 8 A.M.; this is followed by a similar telephone conference at 4 P.M. to evaluate daily progress and another at 7 P.M. to assess the day's production results.

<sup>4</sup> The following description of oil field operations is taken from [10].

The production control system was set up after the 1960 big battle as a necessary means of controlling the mammoth industrial and production effort at Daqing. However, when one attempts to analyze its overall operations, many points remain unclear.

### 3. *The system of work post responsibility*

The units which actually carry out production work are of course the base organizations, i.e., various production teams and workshops. Regulations concerning the operation of these units at Daqing are based on the "system of work post responsibility," which was first created at Daqing.

In the spring of 1962, a bad fire broke out at a new water injection station built near the North No. 2 Water Injection Station for which no one had yet been assigned responsibility. Personnel at the North No. 2 Water Injection Station launched a debate about the problem and concluded that there was a need for a system of clearly delineated regulations for assigning work responsibility. They produced a draft of seven regulations entitled "System of Work Post Responsibility." Point no. 6, "training for acquiring knowledge of facilities and equipment," was later added to complete the eight-point system which finally evolved [32].

The revised eight-point system was adopted in January 1977 by the Daqing Revolutionary Committee. It is as follows [4]:

- (1) Taking clear responsibility. Each individual has definite responsibilities, and the responsibilities of each person should be made clear so that any emergency can be met.
- (2) A clear system of rotating responsibility.
- (3) A clear system of inspection. Inspection points and definite routes of inspection must be established and patrolled.
- (4) A clear system for the maintenance of facilities.
- (5) A clear system of responsibility for quality control.
- (6) Training for acquiring knowledge of facilities and equipment. Workers must understand the construction, purpose, and nature of the equipment they use and how to repair and operate it.
- (7) A clear system for assuring safety in production.
- (8) A clear system for team accounting.

In the preface, the text speaks of the political responsibilities of all workers as the spirit in which the system was conceived and set up. Thus, it says, it is up to the workers to implement and adhere to the system and to revise it based on their own experiences [4].

When I visited a women's oil extraction team at Daqing, I saw posted on the wall of their office a notice entitled "Assignment of Work Responsibility for Personnel on Duty." It included the practical point that "the last person to leave this office must make sure the gas stove is turned off." This conscious attempt to create a set of guidelines holds great importance for Chinese society as it moves away from being a society of rural villages toward becoming an industrialized society.

## II. CONSTRUCTING THE DAQING OIL FIELD

### A. *Zhou Enlai and the Ministry of Petroleum Industry*

Construction of the Daqing oil field began at a critical point in China's history. It was a time when the entire economy was in a depressed state and when the Soviet Union had just cut off oil supplies. In response to these conditions, the CCP Central Committee decided to concentrate its efforts on the exploitation of a new oil field in the Songliao Plain of the Northeast on which purpose a total of 100,000 workers were mobilized.

Actual construction began in the pre-Cultural Revolution period when antagonisms were building between two groups: Premier Zhou Enlai and the Ministry of Petroleum Industry on the one hand, and Chairman Liu Shaoqi and Bo Yibo, chairman of the State Economic Commission, on the other. At that time, the minister of petroleum industry was Yu Qiuli, and his vice-ministers included Li Fanyi, Sun Jingwen, Kang Shien, Xu Jinqiang, and Tang Ke.

Just prior to the first big battle for Daqing, Premier Zhou Enlai met in Harbin with the Heilongjiang Provincial Party Committee and responsible officials in the Ministry of Petroleum Industry to set the leadership strategy for the big battle. The "big battle for oil" was led by Mao Zedong Thought which brought the method of dialectical materialism in order to analyze and solve difficult problems that arose during the battle [33].

On April 10, 1960, the Big Battle Campaign Headquarters and the Daqing Party Committee in their initial announcement proclaimed "the decision to study the work 'On Practice' and 'On Contradiction' by Comrade Mao Zedong." These two works, in pamphlet form, were distributed to everyone participating in the battle. Since at the time only a small number of copies of the pamphlets were available at Daqing, the Daqing Party Committee bought up copies throughout the country. When he learned of the move, Premier Zhou decided to assist the project by sending a planeload of 20,000 pamphlets directly to Daqing.<sup>5</sup>

When the first trainload of crude oil left Daqing on June 1, 1960, it was thought that the big battle was off to a good start. However, in July 1960 the Soviet Union began the withdrawal of its technicians and specialists. In autumn of that year, first Liu Shaoqi then Bo Yibo visited Daqing and remarked, "There is neither order nor regulation, and the work is haphazard" [34] [21]. From 1960 to 1965, antagonism between the two factions apparently continued to deepen over the question of Daqing.

In March 1960, "Charter of the Anshan Iron and Steel Company"<sup>6</sup> was made

<sup>5</sup> Explanation given by Mr. Li Huixin, deputy director of the Daqing Political Department, to the author on November 29, 1976.

<sup>6</sup> This system was outlined by the Anshan Iron and Steel Company and was supported by Chairman Mao. It follows the principle of "two participations, one reform, and three unities" and encourages technological innovation, and develops mass movements, all under the guidance of the party committee.

public, and its theme of "two participations, one reform, and three unities" was soon adopted at Daqing as the basic principles of factory operation. Then the "movement to study Mao Zedong Thought," which had been developing in the People's Liberation Army under the guidance of Lin Biao, minister of the Defence Forces, was introduced to Daqing together with the intensified political commissar system. In 1963, Daqing emerged as China's largest oil field, and its system of production and management seemed to have been consolidated. On December 25, 1963, the New China News Agency reported that henceforth China would be basically self-sufficient in petroleum products.

In December of that year, Chairman Mao said, "Among the dozens of ministries under the central government there are obviously several which have done better and have a better style of work, for instance, the Ministry of Petroleum Industry. Yet the other ministries simply ignore them and have never bothered to visit them, study their experience and compare notes." (This statement was first made public on May 4, 1977 in a statement by Yu Qiuli [30, p. 226].) The Ministry of Petroleum Industry was the only ministry singled out for special mention at that time.

In 1964, Chairman Mao launched the slogan "in industry, learn from Daqing." In the spring of that year, the CCP Daqing Committee formally decided not to build an "oil city" but to set up instead "worker-farmer villages" and to encourage both industrial work and agricultural work, following the call of Premier Zhou Enlai to "combine industry with agriculture, and cities with villages, thereby benefiting both production and people's welfare" [33].

Zhou Enlai was very interested in the progress being made at Daqing, and he visited the site three times (in June 1962 for an overnight stay, in June 1963 for one day, and in May 1966 for an overnight stay).

A progress report on construction work at Daqing up to the time of the Cultural Revolution may be found in Zhou Enlai's report to the First Session of the Third National People's Congress delivered in December 1964. In the report, he said:

Daqing is an example for the study and application of Mao Zedong Thought. Their slogan is "building the oil field on the basis of the two theories," which means studying Chairman Mao's "On Practice" and "On Contradiction." They made use of the dialectical and historical-materialistic stand, views, and methods advanced in the two works to analyze, study, and solve all kinds of problems brought about during the construction. Daqing is also an example of learning from the People's Liberation Army and applying its experience in political work. Daqing all along adhered to the principle of combining centralized leadership with mass movements, the principle of combining high revolutionary spirit with a strict scientific approach, the principle of making technical revolution, and the principle of building the country through industry and frugality, and thus it fully met the requirements for greater, faster, better, and more economical results set by the general line for building socialism.<sup>7</sup>

<sup>7</sup> [17] [33]. See, also, [30, p. 213].

### B. *Daqing and the Cultural Revolution*

In a recent statement made by Song Zhenming, currently a vice-minister in the Ministry of Petroleum Industry and secretary of the Daqing Party Committee, to the opening of the National Conference on Learning from Daqing in Industry, he said, "Lin Biao, Chen Boda, and Jiang Qing and their ilk launched a counter-revolutionary encirclement and suppression against Daqing from the very beginning of the great cultural revolution" [21, p. 21]. From the end of 1966, when the Red Guard movement began to inspire worker takeovers, Lin Biao, Chen Boda, and Jiang Qing began to attack the capitalist-roaders Liu Shaoqi, Deng Xiaoping, Peng Zhen, and Bo Yibo, and called for worker takeovers. All of the ministry-level cadres in the industrial sector were denounced as "agents" and "running-dogs" of the capitalist-roaders. At that time, there seemed to be no difference between the Liu Shaoqi and Bo Yibo group on the one hand and Zhou Enlai and the Ministry of Petroleum Industry on the other.

Since Daqing was flying the red flag at the frontline of industrial work, it inevitably became a target for frontal attacks by Lin Biao and others. At that point, the Chen Boda group announced that "Daqing's red flag is actually black, its standard-bearers have falsified, its cadres are no good, its performances are deceptive." Jiang Qing said, "The practice of building on the two theories is false." Zhang Chunqiao said, "What is this 'building on the two theories'? There are many works by Chairman Mao," and went on to remark that "Wang Jinxi is a person with vested interests. He is famous, has rights, and holds high status. What revolutionary quests does he have?" [17]. On seventeen occasions, fighting teams or investigation groups came from Beijing to Daqing in an attempt to form a movement capable of carrying out a worker takeover. They called the Iron Man Wang Jinxi the "number one political pickpocket of the whole country" and asserted that many model workers were in reality "standard-bearers of the black flag."

Premier Zhou's opinion of Daqing stood in stark contrast to these people. In January 1967, Zhou Enlai said on several occasions that "Daqing is the red flag that was planted by Chairman Mao himself, and the red flag cannot be allowed to be knocked down" [33]. On January 8, he met with Wang Jinxi and defended the Daqing cadres.

From the time of the implementation of the great alliance formed under military supervision until the establishment of the revolutionary committees, Daqing never experienced a complete seizure of power by the rebel workers. During that period, however, there was an occasion when Wang Jinxi was confined in secret detention rooms, threatened with whips and steel pipes, and forced to sign a prepared statement attacking Daqing.

In May 1968, the Daqing Revolutionary Committee was set up, and in April 1969, Wang Jinxi was elected to the Central Committee of the CCP at the Ninth Party Congress. The actual conditions at Daqing during this period have not yet been made public.

The Song report says that, from the time of the Ninth Party Congress in April



1969 until the fall of the Lin Biao group in 1971, several leaders tried to carry out Lin Biao's anti-revolutionary revisionist line at Daqing. According to Song, they opposed the idea of building on the two theories and said that these two theories could change the objective but not the subjective world. They developed so-called "political work" which has little relation with reality. They are reported to have said that whereas Daqing had been red at first, it had later changed to black, that the method of combining industrial and agricultural work to form a new oil field was "sham communism," and that the system of rational rules and regulations was a "revisionist" measure. They are said to have reorganized the Central-Fourth Oil Extraction Team, which had been noted for its "style of strictness and meticulousness" and had once been inspected by Premier Zhou himself, such that it deteriorated into a backward unit [21, p. 22].

Song's report continues:

Using their power and position, they vigorously practiced capitalism and publicly encouraged private reclamation and tilling of land and private pig raising in enterprises under the ownership of the whole people. They even went so far as to collude with the capitalist forces in the town and country in embezzling large quantities of crude oil and rolled steel belonging to the state and exchanging them for meats and vegetables, and yet described their deeds as "strengthening the worker-peasant alliance" and "showing concern for the livelihood of the staff members and workers." The ranks of the staff members and workers were corroded, collective agricultural and sideline production suffered serious damage and grain output was reduced by half. In the name of purifying the class ranks in a bigger way, they opposed "rightist deviation" and arrested large numbers of the so-called capitalist-roaders who had slipped out of their dragnet. As for the revolutionary cadres and masses, they put them to cruel struggles and relentless attacks, fabricating crimes against them and torturing them for confessions, creating so-called cases of counter-revolutionary cliques one after another. After investigations, all these cases were found to be fraudulent. They also alleged that "even if scientific research is not carried out in three years, the oil field still yields oil." As a result, less water was injected underground in the oil field and water pressure was lowered, seriously affecting the old oil field's output. [21, pp. 22-23]

At the beginning of March 1970, Wang Jinxi, who was deeply concerned about the situation, wrote a letter to Premier Zhou Enlai. Zhou spoke with Wang and after hearing his plea, directed in party documents that the policy of building on the two theories at Daqing be revived. After returning from the Ninth Party Congress, Wang organized a scrap recycling team at Daqing, which was his way of resisting the prevailing atmosphere outlined above [27] [33]. The Iron Man Wang Jinxi died on November 15, 1970 after an unsuccessful operation for stomach cancer.

*Renmin ribao* published an editorial on June 20, 1971 entitled "In Industry, Learn from Daqing," which denoted a rising tide of criticism directed at the Lin Biao and Chen Boda group. The editorial was warmly welcomed at Daqing [21].

### C. *The Victory at Daqing*

After the fall of the Lin Biao group in late 1971, the masses at Daqing mounted

criticisms of the Lin Biao anti-party group, but the movement was circumvented by the Gang of Four and their followers at Daqing. Those who criticized Lin Biao were accused of opposing the Cultural Revolution and of undertaking "counter-revolutionary resistance." Criticism of Lin by name was virtually forbidden, as was any criticism of Lin connecting him to conditions at Daqing.

However, at Daqing the followers of the Gang of Four seemed to be less influential than the Lin Biao group itself. Consequently, in the latter half of 1973, the people of Daqing could launch a six-month mass campaign to "recall past sufferings and criticize Lin Biao" and during which the pre-Cultural Revolution experience and the outcome of the Cultural Revolution were summed up. They concluded that the advance of capitalist tendencies at Daqing had been halted, that autonomy over production had been reinstated, and that the danger of knocking down the red flag and restoring capitalism had been avoided [21]. This attempt to rehabilitate Daqing no doubt coincided with a political shift in the central government where many of the personnel from the old Ministry of Petroleum Industry had had their political rights restored.

It was in 1974, during the campaign to criticize Lin Biao and Confucius, that the Gang of Four were finally defeated at Daqing. The person most directly affected by this defeat was Zhang Hongchi, a CCP party official elected to the CCP Central Committee at the Tenth Party Congress in August 1973. Zhang was born in 1936 and became a member of the Central Committee at the age of thirty-seven. He came to Shanghai as an apprentice from his native farming village and remained there until the liberation in 1949. He joined the People's Liberation Army and became a communications specialist. In 1960, he was transferred with his army unit to participate in the first big battle at Daqing and was assigned to work in an electrical surveying station in the Drilling Department. At Daqing, just as during his previous military assignments, he often performed outstandingly, and during the Cultural Revolution he became a political guide in an electrical surveying company. He rose quickly during the Cultural Revolution, and afterwards he was promoted to chairman of his company's revolutionary committee, then to the Drilling Department's revolutionary committee member, and later to vice-chairman of the Daqing Revolutionary Committee [9]. In 1973, he was elected to the CCP Central Committee and the CCP Standing Committee for Heilongjiang Province and became secretary of the Provincial Communist Youth League.

Wang Jinxi, then in the same department as Zhang at Daqing, strongly criticized him. Wang said in 1964,

When several of us went to Beijing for a conference, a photograph was taken of us shaking hand with Chairman Mao. He used that photograph to enhance his own prestige. I said to him, "Comrade, Chairman Mao was in reality shaking hands with all of Daqing. Your beaming face was washed with the sweat of the thousands of workers here at Daqing." He might be pained to hear that, but I wanted to say it. The road we must travel is still long. We still have many, many steps to take. He is a member of the CCP, right? Then he must learn to make his living by hard work. If he does not, he will be stumbling along for sure. [27]

At the beginning of 1974, along with the start of the campaign to criticize Lin Biao and Confucius, Zhang was sent back to Daqing by the Central Committee, then controlled by the Gang of Four, to work with his supporters in the Daqing leadership groups. His mission was to throw Daqing into confusion and to seize leadership of the party committees at all levels.<sup>8</sup> It is said that Zhang was aided in this endeavor by the deputy secretary of the Daqing Party Committee and by the director of the Political Department.

When he returned to Daqing, Zhang publicized an open letter based on a speech by Wang Hongwen about taking power and which supported Wang's points. In the letter, the revival of Zhou Enlai's policy of building on the two theories was attacked as a policy advocated by the right-wing in a bid to take over Daqing; it was criticized as implementing "one set of the revisionist lines in industry." He proposed to conduct a revolution in defiance of the party committee, called for a general struggle against leaders at all levels, and demanded that "Shaozheng Mao"<sup>9</sup> type people be elected to the party committee at all levels.

Discussion began in the Daqing Party Committee on several issues, such as the purpose of the Criticize Lin Biao and Confucius campaign, whether the campaign should be carried out under the leadership of the Party Committee or not, and whether it should be supported by the working class. Many members of the Party Committee refuted Zhang and his criticisms by using various directives which had been issued by Chairman Mao himself and by the CCP Central Committee.

On April 10, 1974, Zhang Hongchi and his supporters changed tactics and opened a meeting to "criticize Lin Biao and Confucius, oppose the counter-current, and oppose the restoration of right-wing power." At the meeting, almost none of the standing committee members of the Daqing Party Committee were allowed to take a seat on the rostrum. Contrary to Zhang's design, however, the idea expressed at the conference prompted the Daqing workers to counter-attack. Posters were put up, and the old standard-bearer Qu Qinghua took a stand in direct opposition to Zhang's supporters among the cadres. Because of the mass counterattack, Zhang Hongchi and his followers finally abandoned their campaign and left Daqing.

The Provincial Party Committee undertook at that time the restructuring of the Daqing leadership group in order to remove wayward elements. As part of that process, in June 1974, a meeting was held for two-level party committee cadres. It was at that ten-day meeting that this struggle was evaluated and summed up, the plot of Zhang Hongchi to take power criticized, and the influences of the Lin Biao counter-revolutionary revisionist line removed from Daqing.

In July 1974, the 37,000 workers at Daqing were elected as advanced-model workers, and in August, a meeting of representatives of model workers from throughout the oil field was held. At the meeting the mistaken theories of the Gang of Four were opposed, and the meeting adopted the slogan "working harder

<sup>8</sup> The following description is based on Song Zhenming [21].

<sup>9</sup> A legalist scholar of antiquity who criticized Confucius and who was allegedly ordered executed by Confucius.

for socialism is reasonable, working harder for socialism makes a contribution, and working harder for socialism is honorable, so let us work ever harder." In addition, at the meeting the establishment of a "museum to honor the heroic Iron Man Wang Jinxi" was proposed, and the museum was finally opened on October 1, 1975.

In this manner, Daqing struggled against the Gang of Four and won at a relatively early date. In June 1976, the Second Daqing Party Congress was opened, and members were elected to the Second Daqing Party Committee. In April 1977, the new officers of the committee were reported. These were: secretary, Song Zhenming; first deputy secretary, Chen Liemin; and deputy secretaries, Han Ronghua, Zheng Yaoshun, Yu Xinsheng, Zhou Zhanao, and Li Yugeng.<sup>10</sup>

With this turn of events, the Gang of Four prevented news of the changes at Daqing from being diffused in China via the mass media. In February 1975, the movie *Chuangye* [The pioneers] dramatizing the creation of the Daqing oil field appeared. On April 8, Jiang Qing issued a list of ten indictments against the film, and public showings were stopped. On July 25, Chairman Mao said, "There are no major errors in this film," but the Gang of Four defied his judgment and continued to oppose it. Jiang Qing is reported to have said to Yao Wenyuan, "Do not publicize articles about Daqing and Dazhai. Even when the release of some news is unavoidable for political reasons, we must not give these stories a prominent place" [12] [5].

During 1976, the last year of the Gang of Four's influence, the policy struggle intensified. At Jiang Qing's personal instructions, a meeting of party secretaries from twelve provinces, municipalities, and autonomous regions was convened in March, and Jiang said that Daqing's American plants were a "disgrace to the Chinese people." She recommended destruction of the American-built ammonia and urea plants at Daqing. Following this attack, Wang Hongwen picked some welders off the Daqing ammonia and urea plant site and directed them to "support" the "work of Wang Hongwen" [7].

In spite of these attacks, construction of the project was accelerated at Daqing in June of 1976 so that by July 31, the fertilizer plant began formal operations. From the beginning, the plant was a success. During that year, a big battle was held to open a new well in the southern part of the country. It must be added that during the big battle the 1205 Drilling Team was severely attacked by allies of the Gang of Four. It was denounced as an "arrogant team" which "knows nothing but production and well-drilling" and which "has come here to occupy land and to secure its own interests." The team's activities were disrupted several times by incidents such as the flooding of the drilling site and the plugging of an oil well with rocks [22].

#### D. *The Future*

The National Conference on Learning from Daqing in Industry was an acknowledgment of the great success of both Zhou Enlai and the Ministry of

<sup>10</sup> The New China News Agency, April 30, 1977.

Petroleum Industry. Yu Qiuli, then minister of the petroleum industry and now serving as vice-premier of the State Council and chairman of the National State Planning Commission, delivered the major address at the conference. The former vice-minister and deputy director of the Big Battle Campaign Headquarters, Kang Shien, became minister of the petroleum industry, and the former director of the Frontline Headquarters, Song Zhenming, was promoted to vice-minister of the petroleum industry and secretary of the Daqing Party Committee. It can be said that the Daqing oil field occupied a noteworthy position in the state cabinet because of its major contribution to China's industrial development.

What are the future prospects of the Daqing oil field? According to a statement made by Song Zhenming on April 20, 1977, by 1985 Daqing will have engaged in five struggles to make five great contributions to the nation:

First, we will fight a hard battle to expand and improve the oil field, persist in achieving stable and high yields on the basis of the current production level and set new standards in oil field development in the world. Second, we will strengthen petroleum prospecting, carry out production both in depth and breadth and strive to find more new oil fields. Third, we will accelerate the development of petroleum and chemical industries and make preparations for building a large ethylene plant. Fourth, we will strive to increase accumulation of funds so that, by 1985, there will be a big increase in total industrial output value and profit delivery to the state as against that of 1976. Fifth, we will strive to triple grain and vegetable output and the number of hogs raised by 1985, and achieve self-sufficiency in grain, vegetables, meat and edible oil. [21, p. 52]

When Chairman Hua visited Daqing in April 1977, he announced plans to develop a new deeper oil field and to exploit the periphery of the current Daqing site.<sup>11</sup> In October, it was announced that, in contrast to the current drilling depth of 1,000 meters at Daqing, the new oil field would tap reserves at a depth of 3,000 meters [2].

Some important changes occurred at Daqing in the latter half of 1977. At that time, secretaries and deputy secretaries of the party committees at various levels organized work teams composed of old cadres, old standard-bearers, and old workers designed to "teach, help, and lead" in the work at Daqing. A work team was associated with every basic-level unit of the oil field, and secretaries and deputy secretaries often worked as political guides in the unit. Work teams were engaged in the task of passing on the work style and the tradition of Daqing's past successful big battles to a new generation cadre of basic-level units, the majority of whom had emerged after the Cultural Revolution from among general workers. They endeavored to form correct basic-level party branches.<sup>12</sup>

Daqing's 1205 Drilling Team (composed of about seventy workers) is an example of using experienced workers to help train new workers. Since the team came to Daqing, it had trained and dispatched to other oil fields a total of 95 cadres and over 300 workers. In other words, the 1205 Drilling Team had produced six new complete drilling teams. Because of the relatively low average

<sup>11</sup> The New China News Agency, April 23, 1977.

<sup>12</sup> The New China News Agency, October 11, 1977.

age of the workers in the team and because the older, more experienced workers are sent to other oil fields, political education centering on the legacy of the Iron Man has played an especially important role.

It is said that in the ten years from the beginning of the Cultural Revolution to the era of the Gang of Four, many youths in China developed a mentality of "overturning principles" and "going against the tide." The intensive political work carried out at Daqing might be seen as an attempt to counteract prevailing unprincipled attitudes. Reeducation of the party cadres at the basic level was the first and foremost effort of this campaign.

### III. THE IMPORTANCE OF DAQING

It is very significant that even during the Cultural Revolution, when the Lin Biao group was in control, and then during the struggle against the Gang of Four, the Daqing oil field never stopped production. In fact, with the exception of temporary slowdowns due to the Cultural Revolution in 1967 and 1968, the oil field has continued to develop in a rapid and balanced manner.

This is perhaps due to the fact that the organizational infrastructure at Daqing was built on a sound foundation laid down between the time of Daqing's first big battle and the beginning of the Cultural Revolution. The huge work force of nearly 100,000 assembled on the northeastern plains is composed of advanced workers and working military troops who have maintained the highest nationwide standards. These laborers were tempered in the course of the big battle and have become a highly productive and disciplined work force. In addition to the initial work force, flocks of youths were mobilized, in some cases from cities but generally from rural districts, to be trained as productive workers at Daqing. Daqing later dispatched 56,000 trained cadres and workers to other oil fields throughout the country. Many of those who were sent to other sites had participated in the first series of big battles, while those now working at Daqing are for the most part younger workers who have participated in subsequent battles. These trained workers constitute the basic underpinning of the Daqing operation.

In addition, the Daqing oil field has a number of other special characteristics which are worthy of note. During the coming several years, Daqing will be considered the "standard" or the "model" not only for other oil fields but also for other industries in China. Therefore, notwithstanding the more recent policy waverings pertaining to the reorganization of the Chinese economy, it is possible that Daqing's special features will be incorporated into the model governing the way in which much of the rest of the economy will be restructured. The following are some of the dominant features of the Daqing oil field:

(1) Daqing created a unique system for managing the mammoth work force of nearly 100,000 people, thereby fostering a distinctly Chinese labor spirit among production workers.

Chairman Hua Guofeng commented on this aspect of Daqing in a speech given on May 9, 1977:

Daqing has applied the concept and line on army building that Chairman Mao formulated during the protracted revolutionary wars and the People's Liberation Army's tradition and experience in doing political work to the concrete practice of industrial construction so as to strengthen ideological remoulding, resist corruption of the workers by bourgeois and petty bourgeois ideologies, enable people from various classes to "make the transition towards the working class," and build up a contingent of industrial workers who are highly revolutionized, both red and expert and first-class at fulfilling fighting tasks. [15, p. 79]

The theme of eliminating bourgeois thinking and having everyone move toward the working classes to which Hua referred is one of the basic points in China's industrial revolution; it is a process in the course of which China is going to give a birth to a new type of person who will build an industrialized society under Chinese socialism. Daqing is a concrete expression of how this transformation can take place.

Interestingly enough, when one looks at reports from Daqing, one notices that emphasis is always placed on ideological and political work, while detailed conditions concerning personnel management, planning, and financial management are deemphasized. For example, we have no clear, detailed reports on the pay scales in use at Daqing or on the system of bonuses for merit. One receives the impression that the recent discussion in China on adjusting wages and increasing bonuses is in contradiction with the system under which Daqing is run. One of the key points to watch is whether or not the Daqing system of production and management will be able to survive the coming period of change.

(2) Daqing also became a model for national oil exploitation and development.

The work force at Daqing was originally composed of workers taken from the oil fields at Yumen and Karamai, and, as mentioned earlier, Daqing itself has sent about 56,000 cadres and workers to other oil fields. A special feature of Daqing has been its role as a center and training ground for advanced methods of personnel management and the technological development of the petrochemical industry. Daqing follows the line of the Ministry of Petroleum Industry and helps the ministry in disseminating the Daqing system of waging big battles to open up and develop new oil fields. In this respect, the Daqing Party Committee has played a key role in developing leadership skills and a distinctive work style which will spread to oil fields throughout the country.

It might be said that by understanding the operation of Daqing, one will be able to understand the operation of the Dagang and Shengli oil fields as well. Every major enterprise in China is apparently expected to become a center for the development of the technological and management skills required to modernize the nation.

(3) Daqing further represents the successful combination of political and economic work and industrial and rural work in the sphere of both political organization and daily life.

Daqing is, after all, not only a large industrial complex; it is also an important self-administrated regional center. Daqing, then, did not follow the Soviet practice

of first setting up an industrial city and then a compound for workers' housing with garden plots for household use. Rather, under the slogan of "benefiting both production and people's welfare," Daqing developed a series of worker-farmer villages each with a number of living quarters built around them. At the same time, by forming family production teams, it was easy to develop collective organizations to engage in the agricultural production.

The system of life at Daqing is based on the principle of overcoming the "three divisions," those between industry and agriculture, between urban and rural life, and between manual and mental labor. It is a system which will make Daqing self-sufficient in food and agricultural products. Mao Zedong's directive of May 7, 1966 stated that most industrial and mining operations would, like Daqing, try to combine agricultural and subsidiary industries with basic industrial work. It is clear that one function of this system is to prepare for a possible wartime emergency, and for this reason, the oil storage center at Daqing is situated underground.

(4) Daqing is a complex which tries to develop its own technology while learning from abroad at the same time.

Daqing is proud of its achievement of having discovered a huge oil field in this continental sedimentary basin, of having adopted at an early date water injection method which has considerably increased the rate of oil extraction, and of having developed various new techniques such as "extracting oil from and injecting water into oil layers and testing and transforming the various oil layers" [21, p. 26]. The technology developed to carry out this complex procedure is said to be equal to or better than existing world techniques. Research to learn from foreign industrial technology is also constantly under way. Daqing experts try to combine research and experiments undertaken at experimental production sections with those carried out at other sites around the oil field. In addition to this, the Daqing system of combining a team of specialists with workers has contributed to disseminating advanced scientific technology throughout the oil field [28].

The American-designed chemical fertilizer plant on which work was begun in May 1974 and which went into production on July 31, 1976, was built and is now run by Daqing workers and has raised still higher the level of technological expertise at Daqing.<sup>13</sup> The process of raising the technological level seems to have moved forward relatively smoothly and have succeeded in avoiding the obstructions placed in Daqing's path by the Gang of Four.

<sup>13</sup> See *Renmin ribao*, April 27, 1977.

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