

# *Exploration on innovative mode of marketing work of independent sales products of oil field companies*

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**Abstract:** With the improvement of the domestic economy, the oilfield business has also gained more opportunities, and the oilfield company has achieved small innovation in the development of independent sales products, but there are still some problems in the actual sales process, such as unformed sales model, fixed price, single channel and so on. This paper analyzes the current situation of independent sales of products in the marketing work of oil field companies at the present stage, carries out full market research on independent sales of products, focuses on customers, builds the marketing innovation model and operation mechanism of oil field companies in independent sales of products, and provides guidance for the actual marketing of enterprises in combination with the innovation model.

## **1. Background of marketing research on self-selling products**

### **1.1. To meet the needs of market-oriented reform**

At present, the supply and demand situation and market pattern of oil and natural gas have undergone drastic changes, the production organization structure and the difficulty of connecting production and marketing have increased, and the sales of oil field by-products are facing new challenges. For oil field companies, independent sales of oil and gas by-products is a very important link in marketing, which can reflect the added value of the company to the greatest extent, especially in the current market economy situation in China, the marketing advantage of independent sales products has become more and more significant<sup>[1]</sup>.

### **1.2. To meet the needs of cost-effective development**

China Petroleum and Chemical Industry Federation released the “Economic Operation Report of the National Petrochemical Industry in 2022”<sup>[2]</sup>, showing that the planned added value of the petroleum and chemical industry increased by 1.2% over the previous year; Operating income increased by 14.4%, and total profit decreased by 2.8%; The cost per 100 yuan of revenue was 83.26 yuan. From the perspective of various industries, the benefits of oil and gas mining industry increased

significantly, and the total profit achieved for the year increased significantly by 109.8%. The data shows that the petrochemical industry is facing a situation of rising overall profits, and oilfield enterprises are bound to achieve precise investment and maximize benefits, and are expected to achieve economic benefits of enterprises.

### 1.3. The need to face the new economic situation

With the rapid development of science and technology, artificial intelligence has been widely applied, and the competitive strategy of the oil and gas by-product industry has gradually changed from offline price strategy to multi-platform marketing strategy [3]. The improvement of basic information and demand data of different kinds of customers has spawned new ideas, new methods and new means. Through the customer portrait, data mining and accurate analysis, it is labeled and classified, and the marketing strategy is customized and adapted to gradually achieve marketing results.

Based on this, this paper takes an oilfield company as an example (hereinafter referred to as the company), which has a high market share in the local market and has a high bargaining power. This paper discusses the marketing innovation mode and operation mechanism of oil field companies from the aspects of independent sales of oil and gas by-products marketing mode innovation, product marketing strategy innovation and marketing guarantee system innovation, so as to provide theoretical reference for the full realization of the goal of maximizing the benefit of oil field enterprises and the continuous improvement of operating efficiency.

## 2. Relevant theories and contents of marketing of independent sales products

### 2.1. Marketing related theories

Marketing is a process in which an enterprise takes user demand as its starting point, obtains user demand quantity, purchasing power level and industry expectation based on previous transactions, carries out various business activities in an organized and planned way, provides satisfactory products to users, and then maximizes enterprise benefits [2]. Since the development of market economy, the marketing theory has been evolving and expanding continuously. The current marketing theory mainly includes 4P, 4C and 4R. The comparison of the three is shown in Table 1 below.

Table 1: The difference and comparison of 4P, 4C and 4R

Category	4P	4C	4R
connotation	Product	Customer demand	relation
	Price	Customer expense	economize
	channel	Customer convenience	relevance
	Sales promotion	Customer and enterprise communication	reward
Marketing concept	producer-oriented	Market demand-oriented	competition-oriented
Marketing objective	Implementation requirement	Customer satisfaction maximization	Maximizing mutual benefit for all parties
Marketing method	Scale marketing	Differentiated marketing	Integrated marketing
Customer communication	One-way communication	Two-way interactive communication between customers and enterprises	Two-way or multidirectional communication

In actual marketing, the three theories do not distinguish between good and bad, but the actual application scenarios are different. 4P is production-oriented, emphasizes efficiency and scale, and considers the interests of manufacturers before customers, ignoring market conditions to a certain

extent. 4C theory is developed on the basis of 4P, more customer-focused, the biggest feature is customer satisfaction as the goal; 4R theory is born from the new stage of market competition. Compared with 4C and 4P, 4R theory pays more attention to the relationship between internal and external enterprises<sup>[2]</sup>. In the application practice, enterprises can not separate the three, should be combined with their own and the specific situation of consumers flexible choice of marketing theory and its combination.

## 2.2. Self-selling product marketing content

The independent sales products in this paper include scattered gas, light hydrocarbons, ethane, liquefied gas and condensate, and the marketing of each product has its different connotation. Scattered gas includes oil field scattered gas, gas field scattered gas and pilot production and production Wells scattered gas, etc. At present, the company's scattered gas sales channels are mainly cost contract, centralized bidding, supplemented by online auction. Sales business process mainly includes sales plan, user, contract management and other steps.

Light hydrocarbons can be processed to obtain a variety of chemical products, such as aromatization to produce aromatics, and further processing can obtain a variety of high value-added chemical products, such as light hydrocarbon cracking to produce ethylene. The company's light hydrocarbons are sold in the form of spherical tank storage and vehicle transportation, and the additional products of the internal refinery are sold in the market mode.

Ethane is the highest quality ethylene cracking raw material, mainly separated from natural gas, petroleum gas, coke oven gas and other gases, compared with the traditional naphtha processing ethylene technology, with less equipment investment, low production cost advantages, and ethane is flammable and explosive products, there are safety risks in transportation. At present, the company's sales market mainly comes from within the company for sales.

Liquefied gas is an auxiliary gas produced in the refining process of petroleum. It is a pollution-free, high calorific value and easy to use energy. It is mainly used as raw material gas for fine chemical industry, such as refinery cracking raw materials, alkylated raw materials and aromatization raw materials.

Condensate refers to the liquid composition of gas condensate from condensate gas fields or oil fields, also known as natural gasoline, which can be used as fuel, refining raw materials, the production of naphtha and aromatization raw materials, and also the production of chemical light oil and other fine chemical products with high added value. At present, the company's condensate is processed centrally by means of pipeline transportation.

## 2.3. Limitations of traditional marketing model

### 1) Ignoring the immaturity of customers and the limited resources of enterprises

Under the traditional oil and gas by-product marketing model, enterprises are mainly market-oriented, and select the target market and marketing strategy combination of various by-products (ethane, light hydrocarbons and liquefied gas) through market research, and concentrate all available internal and external resources to meet customer demand as much as possible [3]. But its biggest flaw is to ignore the immaturity of customers, limited enterprise resources on the development of marketing adverse effects.

### 2) The market demand reaction cycle is long and the speed is slow

By analyzing the traditional marketing mode, it is found that one of the characteristics of this mode is the slow response to the market demand and the long cycle. Nowadays, the process of traditional network marketing is usually the development of concept products by developers, and then the sample is made into the form of final sales products. This process will result in a long and slow response

period to market demand.

### 3) Blindly seek market personalization

The traditional oil and gas by-product marketing model has the characteristics of excessively high market personalized demand and one-sided pursuit of market personalized products. This marketing model focuses on the selection of the target market, with the help of low network operating costs to obtain the maximum sales revenue, but in the actual marketing is often unsatisfactory and difficult. Under normal circumstances, enterprises will reduce costs by increasing the sales volume of products, but increasing sales volume means the implementation of differentiation strategy, which will inevitably lead to the increase of operating costs in the end. Therefore, the model of blindly and unilaterally seeking and satisfying personalized products in the market is not advisable.

## **3. Analysis of marketing status and problems of independent sales products of oil field companies**

### **3.1. Analysis of marketing status of independent sales products**

The company's current oil and gas by-products mainly include loose gas, light hydrocarbons, considering the future market development situation and space, will also include ethane, liquefied gas and condensate. In recent years, the company has actively responded to national policies and the changing market, and expanded the scale of operation while reducing costs and increasing efficiency.

Due to the lack of marketing experience of fragmented gas marketing, it is necessary to continue to develop the market. The production branch shall implement the filing system for the price management of scattered gas, and authorize the company to set the sales price of the product by itself, and report it to the subsidiary company for the record. With the efficient improvement of stable light hydrocarbon production capacity after the deep-cooling unit is put into operation in each operation area of the oilfield, surplus light hydrocarbons can be sold under the premise of satisfying internal supply and demand. While actively developing users in the region where the enterprise is located, the product is effectively organized for online auction in the exchange. At present, the pricing of light hydrocarbons is guided by the market-oriented principle, and the price management mode is implemented internally with negotiated pricing as the core, and the price management mode is implemented externally with bidding as the core.

In view of the problem that ethane products cannot be sold abroad due to the process in previous years, equipment upgrading will be carried out in the relevant operation areas, and sales will be expanded on the basis of considering future market conditions, and the price will be formulated in accordance with relevant regulations. Liquefied gas products follow the requirements of the headquarters, and the output is given priority to its own refinery, and the surplus is purchased and sold by relevant enterprises; In-product pricing is consistent with in-supply stable light hydrocarbon products. Due to the special nature of crude oil itself, condensate oil has high requirements for processing qualifications and needs to have dual rights refining qualifications. At present, companies in and around the company that do not meet the requirements can take over and only supply to internal refineries. The price consists of the benchmark price of internal crude oil and the discount.

### **3.2. Analysis of marketing problems of independent sales products**

Oil and gas by-products have not yet fully formed the market, and in different market environments, the profit level of various products is not the same. The company is currently facing quite fierce competition in the market. In order to effectively improve market competitiveness and optimize one's own level, it is necessary and urgent to comprehensively innovate marketing models<sup>[4]</sup>. However, at present, there are still prominent problems in the marketing process of oil and gas by-products, which

are reflected in the following aspects:

1) It is difficult to recycle the product and the pressure resistance is weak

Some oil and gas by-products have high processing requirements, low production, scattered gas well locations, and professional equipment is required for timely recovery and treatment, and long-term storage conditions are not available, making it difficult for users to find, such as scattered gas; Some by-products have special storage properties and poor risk resistance, such as light hydrocarbons, ethane, and condensate.

2) The pricing mechanism is inflexible

Weak bargaining power, lack of flexible market pricing mechanism, unable to maximize profits, such as fragmented gas; The market price deviation of certain by-products is large and does not conform to the market law, such as light hydrocarbons; At present, the ethane demand market mainly comes from internal supply, and it depends on the internal market. The internal supply pricing of LPG is the same as that of stable light hydrocarbon sales. Due to its dependence on crude oil system, the pricing mechanism is not flexible. At present, condensate has a certain bargaining power, but it still needs to be adjusted reasonably.

3) Lack of market information

Due to the lack of market research by the by-products, due to the technical service cooperation situation with an energy company, it can not directly contact the client, and the market understanding is not enough, such as scattered gas; The market demand is large, the marketing consciousness is weak, the lack of professional marketing management personnel, most of the by-products have such problems, especially liquefied gas; The company has the capacity to supply condensate oil on a large scale in the region, which belongs to the monopoly operation, although it can guarantee the market supply, but the local market does not have dual rights qualified buyers.

4) Single sales channel

Some oil and gas by-product recycling and processing channels are single, and require the support of professional equipment, resulting in limited sales objects and channels, such as loose gas and ethane; The use of online auction sales, customer selection requirements are high, difficult to meet the processing requirements, but also need to consider product transportation; Single channel, due to the fluctuation of the market price of crude oil, has a great impact on the sales channel, such as light hydrocarbons. Because of the special nature of condensate oil, it is difficult to export without dual qualification.

5) The level of marketing staff is uneven

The content and quality of marketing play a crucial role in the sales of oil and gas by-products. However, compared with other functions of the department, the company has a weak influence on the formulation and implementation of marketing strategies. Besides, the company lacks a dedicated research and development department of oil and gas by-products market and sales personnel to engage in the development of by-products market, and the sales personnel do not pay enough attention to marketing work. The retention of core, important and other types of customers is insufficient. At the same time, although most of the marketing personnel have rich practical experience, they do not have the theoretical basis of marketing, and with the deepening of the marketization degree, they will not be able to quickly adapt to the situation.

#### **4. Construction and operation of marketing innovation model of independent sales products of oil field companies**

In view of the four problems existing in the company's sales process of discrete gas, light hydrocarbons, ethane and other independent sales products, such as product particularity, inflexible price mechanism, insufficient market development and single sales channel, it is necessary to adjust

the marketing model in a timely manner to ensure the continuous and stable sales of various oil and gas by-products<sup>[5]</sup>, This paper holds that the company should integrate the combination of marketing programs that fit the marketing environment, adopt effective marketing methods systematically and comprehensively, and realize the maximum benefit of the company. Aiming at the current marketing problems of the company, this paper puts forward the marketing strategies and measures for the development of the independent sales products business of oil field enterprises from four aspects: product, pricing, channel and market strategy.

#### 4.1. Independent sales product marketing model construction

1) Product strategy - Explore product sales model to improve economic efficiency

Product is the premise of enterprises to carry out business activities, providing satisfactory products and services can meet the market demand to the greatest extent, and product strategy is the core of the marketing strategy mix. With the improvement of economic development and supply and demand level, the concept of product has also changed, not only referring to physical goods, but also including service products. In order to better adapt to market development and user needs, enterprises need to continuously improve and optimize product portfolio, which mainly includes four dimensions, namely breadth, depth, length and consistency (as shown in Figure 1).

Four dimensions of product portfolio	scope	The coverage of the business operating product line
	profundity	The number and variety of products in each product line
	Length	Number of product families in a single product line
	consistency	Correlations between products within a portfolio

Figure 1: Four dimensions of the product portfolio

In view of the company's current independent sales of products, this paper puts forward the following improvement strategies. First, the main product technology research to enhance the added value of products. The company pays attention to the production planning of liquefied gas while giving full play to the advantages of internal and external resources, giving greater preferential efforts to market segments; In the production of other by-products, we strictly control the quality of products, master the consumer behavior and psychology of customers, and transform the added value of products into economic benefits. Second, strengthen quality management to improve customer experience of product use. When the company actively explores the production problems of scattered gas recovery projects and ethane and other products, it is necessary to strengthen quality management, timely update the equipment, do a good job in customer purchase records, and continue to pay attention to the use experience. Third, adhere to the linkage of production and marketing, all production and marketing. According to the field research of the oil and gas by-product processing market demand in the region where the company is located and the surrounding area, constantly improve and improve the supply structure of products, improve the matching with market demand, and realize the reasonable distribution of product production proportion considering the production of liquefied gas and light hydrocarbons based on the output. Fourth, pay attention to market

segmentation and increase market share. Give full play to the resource advantages of the oilfield company, fully support and give priority to the development of light hydrocarbons, condensate and other markets, so that its market share continues to increase.

2) Price strategy - Improve product pricing mechanism, increase sales net profit

Pricing strategy is an indispensable part of marketing mix, and price factor is one of the most important factors in marketing, which plays a decisive role in enterprise market competition. Generally speaking, price is the key to the success of the transaction, and the most difficult factor in the marketing strategy mix is price. The strategy to achieve the overall goal through pricing is called the pricing strategy (see Figure 2), which serves the overall strategy and mission of the company and affects the production operation, sales and other aspects.

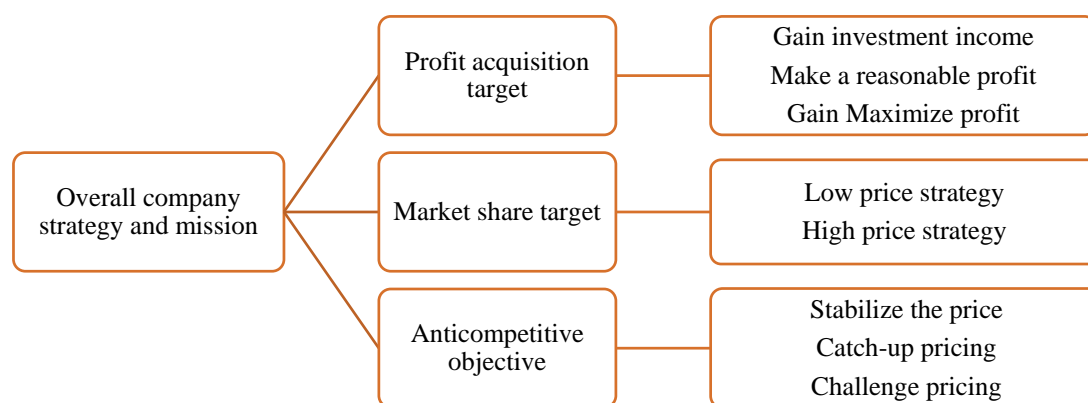


Figure 2: Enterprise pricing objectives

Combined with the basic situation of the production and operation of the company's independent sales products and the industry competitors, this paper proposes that we should deepen market research based on the value of the industrial chain, and implement marketing methods such as differentiated pricing, high quality and high price, increasing output and creating efficiency. First of all, market-oriented principles as a guide to improve the overall economic benefits. On the basis of full market research, in-depth contact with the client to explore the degree of market understanding; Internal implementation of negotiated pricing as the core of the price management mode, external implementation of bidding as the core of the price management mode, improve the independent sales of product pricing variable degree, to achieve profit maximization. Secondly, consider the relationship between supply and demand to stabilize product prices. Since the pricing of ethane, light hydrocarbons and other products is affected by raw materials, competitive products, etc., the company, on the premise of ensuring safe production and smooth road, in-depth research on the pricing theory and method of market-oriented products, by classifying the importance of the influencing factors of pricing, the use of analytic hierarchy process to determine the final price. Finally, master the pricing rhythm and maintain market price stability. The sales price of products should focus on the price changes of competitors in the same industry while closely following the market and ensuring the coordination of volume and price, improve the communication process and mechanism to jointly maintain the overall market balance.

3) Channel strategy - Expand the product sales market, dig deep sales channels

In order to optimize the sales channels and supply chain of the company's independent sales products to the greatest extent, it is necessary to continuously expand the types and types of channels, and continue to increase investment in development. In practice, the staff of the sales department can refine the sales management methodology, enrich the promotion means, and expand the business of alkane, condensate and liquefied gas.

The company's channel strategy is divided into the following parts: (1) Implement the

“online+offline” multi-channel strategy and appropriate channel incentives. On the basis of considering product transportation, fragmented gas sales broaden the sales channels of products, not only considering the introduction of oil field pipeline network and the export mode other than customer pickup, but also establishing an online sales platform, which can improve the transparency and effectiveness of purchase and reduce procurement costs. (2) Establish a multi-solution mechanism for channel transportation and scientifically promote marketing work. All channels should actively communicate and coordinate to ensure smooth sales of independent sales products, prepare alternate channel transportation plans, prevent the problem of poor channel circulation caused by objective reasons, ensure the transportation of products, and continue to promote scientific and accurate marketing. (3) Implement channel construction and improve marketing network. Considering production and transportation costs, we will build sales channels for liquefied gas, ethane, light hydrocarbons and other products, use internal electronic information resources of the company to strengthen cooperation with external network sales platforms, and improve marketing system and services. In addition, establish cooperative relations with the surrounding county and municipal companies, open up supply channels, and supplement the civilian market with diversified sales channels.

4) Market strategy - positioning quality products, precise stimulation of consumer nerves

Marketing strategy is how to design the promotion to be attractive enough to consumers, and at the same time, to quickly and effectively present the relevant information about the product to be sold. In addition to the effective use of electronic information technology to improve the convenience of the company's marketing, the active improvement of the information feedback system in the process of providing services is conducive to the collection of customers' real-time feedback on products or services and the improvement of customers' overall satisfaction with the company <sup>[6]</sup>. The promotion strategy consists of push strategy and pull strategy, which are summarized in Figure 3.

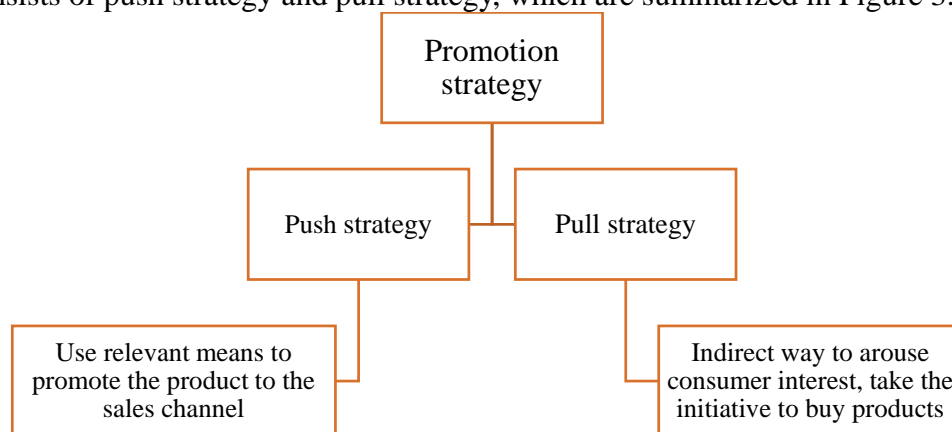


Figure 3: How promotional strategies are composed

The promotion strategy adopted by oil field companies for independent sales of products includes three dimensions, one is to track customer demand and achieve precision marketing. Prioritize and arrange the company's core and key customer needs to improve customer interaction experience; Long-term collection of customer information, such as consumption, information browsing, etc., the use of big data to digital portrait of customer groups, and identify the behavior of each consumer group, laying the oil and gas by-product precision marketing data foundation. The second is to build a digital marketing system and innovate sales models. Establish a marketing management system, rely on the convenience of online trading system, form a record of market transaction data and other transactions with various customers, and make portraits of customers and subsequent market forecasts with the help of relevant data, so as to achieve digital, professional and efficient marketing. Third, combined with regional factors, the implementation of preferential sales. The market for product sales



is restricted, and the transportation of oil and gas by-products such as ethane to distant areas has higher capacity requirements and more expensive transportation costs. Taking into account the different freight rates in different regions, for customers in the surrounding counties or further away from the company, the transportation costs are appropriately discounted to increase the sales of oil and gas products.

#### 4.2. Operating mechanism of marketing model of independent sales products

With the steady growth of domestic economy, oil and gas by-product marketing has gradually turned into a buyer's market, which requires oil field enterprises to adopt appropriate marketing models. The process of independent product marketing of oil field companies involves complex and broad aspects, including not only market research, feasibility analysis, but also product pricing and distribution. Marketing operation mechanism is formed by the interaction of the above links<sup>[7]</sup>. In this mechanism, the enterprise determines the transaction price through the supply and demand relationship, and determines the production volume, sales volume and inventory volume through the price change. This mechanism operates under a sound market system and supervision mechanism to ensure market fairness and balance between supply and demand. The operating mechanism of the marketing model of oil field companies is shown in Figure 4.

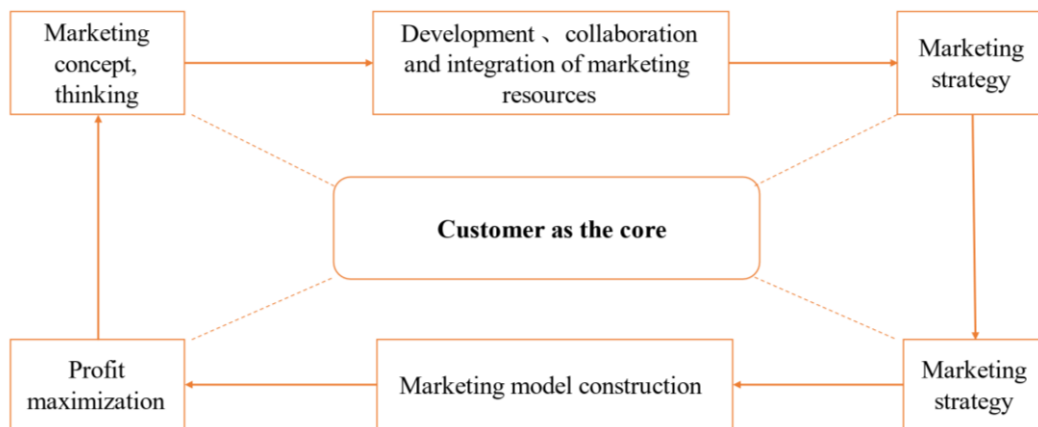


Figure 4: Marketing operation mechanism of oilfield enterprises

The operation mechanism of marketing first is to form marketing concepts and thinking. Oil field companies develop, coordinate and integrate marketing resources according to changes in market and customer needs, and organize business activities with a purpose and plan.

Through the analysis of market opportunities, market positioning, personnel security strategy and product development, pricing, operation, promotion and other strategies to build a marketing model, so as to achieve the goal of maximizing corporate profits, the whole cycle process forms the operating mechanism of marketing. In this mechanism, the core of any link is the market as the center, around the two dimensions of customer and market, to win-win as the goal, adhering to the business philosophy of customer first, following the market rules of fair competition, to ensure the healthy competition and sustainable development of the market. In marketing operation mechanism, marketing concept and thinking are the premise of resource development and coordination, marketing strategy and strategy are the way of model construction, and profit maximization is the ultimate goal of marketing.

## 5. Conclusion

Independent sales product marketing is of great significance to promote the development of oil field enterprises. At present, there are still some problems in the marketing of oil and gas by-products, such as difficult product recovery, weak pressure resistance, inflexible price mechanism, insufficient market information, and single sales channels, which hinder the long-term development of enterprises. The managers of oil field enterprises should face up to these problems and find effective ways to solve them. This paper analyzes the marketing mix strategy of oil field independent sales products, and puts forward the strategy including product, pricing, channel and market. According to the five kinds of products, scattered gas, light hydrocarbon, ethane, liquefied gas and condensate oil, the strategy analysis of each product is carried out. Based on the combination strategy analysis of five categories of independent sales products, the specific marketing strategy measures of oil field companies are put forward, including exploring product sales model, improving economic benefits, improving product pricing mechanism, increasing sales net profit, expanding product sales market, digging deep sales channels, positioning high-quality products, and accurately stimulating consumers' nerves.

In the current market environment, oilfield companies should start from customer demand, analyze and understand customer behavior and demand, pay close attention to market dynamics, adjust strategies in time, and maintain customer stickiness and own leading edge. At the same time, we continue to optimize the marketing strategy, focus on the development goals and policies of the enterprise, follow the market-oriented principles, increase the economic benefits of the enterprise, and promote the long-term progress and development of oilfield enterprises. Based on technology and other innovation levels, we actively carry out the whole process and all aspects of precision marketing, improve quality and efficiency, and achieve the stable development goals of oil field companies. Expand the sales channels of independent sales products and implement the sales model and strategy of market-oriented price mechanism. Through the adjustment of marketing model and price policy, it is an effective means for oil field companies to provide products and marketing models to meet the needs of customer development, so as to open up a broader development space for oil field enterprises and improve their core competitiveness in the market.

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