J. H. Davidson - G. O.

December 15, 1972 R. E. Hatton

1973 MARKETING PLAN

C. Paton

Attached are the 1973 marketing plans for the following product lines:

Pydraul
Santosafe
Turbinol
Santovac/PPE
Coolanol

Roger and I are in agreement on the 1973 goals for these products. We are ready to discuss them at your convenience.

J. H. Davidson

/pep
Attachments

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PLAINTIFF'S EXHIBIT
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PYDRAUL

Product Summary

The Pydraul fluids were reformulated for the second time in 1972 as our customers' understanding of PCB problems was stretched to the limit. We came through the second reformulation in excellent condition considering all of the technical and marketing problems faced in 1972. Essentially all of the Pydraul business was maintained with the exception of partial losses at Chevrolet-Bay City and Alcoa - our retention was 95+% on a dollar basis.

We have a very complete line of FR hydraulic fluids with which to build sales in 1973 - the higher cost Pydraul E Series straight phosphate esters (7 fluids) and the lower cost Pydraul C Series phosphate ester/oil blends (3 fluids). We have few demonstrable product advantages over competitive straight phosphate esters with the Pydraul E Series and must rely on strong salesmanship and technical service to give us the edge over competition. Our phosphate ester/oil blends have some technical advantages over competitive blends, however the C Series products are priced at $.20-$.50/gallon higher than competitors thus making it necessary to justify our premium price (through service) to the customer on a continuing basis.

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Market Situation

Due to the second reformulation of the Pydraul fluids and the beginning of our marketing of straight phosphate esters like Stauffer and Houghton, there was much turbulence in the marketplace in 1972. This was particularly true at some major accounts where pricing (on the straight PE fluids) dropped 5-10% below schedule. This price action affected about 15-20% of the Pydraul volume.

It is expected that price attrition on straight phosphate ester products will not advance in 1973 and that pricing levels will firm and may trend upward slightly due to higher raw material costs to all major suppliers. Pricing at some major accounts, particularly General Motors, is expected to remain below schedule but should gradually firm up. Pydraul C Series pricing will not advance due to competitive phosphate ester/oil blend prices remaining at 5-20% below our schedule. While most of the competitive PE/oil blends are technically inferior to ours, Stauffer's new blend, Fyrtek 290, appears to be a good product and may force us to lower Pydraul 312C pricing if a major account is threatened.

Overall, 1973 market conditions are expected to be more stable than last year. Although we will not significantly

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increase our present 40-45% share of the synthetic fluid market, more stable conditions with less emphasis on "price selling" expected, should favor our technical selling and service approach.

General Strategy

Following a year of "scrambling" to retain our market share, we expect to return to more normal selling conditions in 1973. We will emphasize the technical advantages of our fluids where applicable and return to "offensive" selling to increase our Pydraul business primarily in the steel industry where our market share is lowest and business is the most concentrated.

With the Pydraul E Series products we will continue to emphasize superior thermal stability and better long term supply position due to synthetic raw materials, our biggest selling advantages. We will remain price competitive, particularly at major accounts, where any lost business will cost us significant market share and increase our manufacturing costs due to lower volume. Selling emphasis will be placed on the E Series over the C Series due to higher pricing and profitability and because superior thermal stability is a significant selling advantage over competitive straight PE's,

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particularly in the steel industry.

We will continue to dominate the PE/oil blend market with the Pydraul C Series products despite significantly higher prices than competitive products. This will be accomplished by emphasizing technical superiority and by reinforcing our customers' belief that the low cost fluids are relatively safe products which give good hydraulic performance at lower cost than straight PE fluids. We will match a lower competitive PE/oil blend price only where a major account is seriously threatened and the customer does not need the better performance of our products.

1973 Goals

1. Sell the following Pydraul fluids in 1973.

	Goal		Budget	
	lbs (000's)	$ (000's)	lbs (000's)	$ (000's
Domestic	12,000	3,600	10,792	3,110
U. S. Export	1,903	652	1,903	652

2. Concentrate effort on gaining new business in the steel and automotive industries with the major thrust at the following large potential accounts. Show year to year

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sales improvement at a minimum of four of these accounts.

U. S. Steel	Chevrolet - Bay City
Bethlehem Steel	Chevrolet - Toledo
Inland Steel	Chevrolet - Tonawanda
Republic Steel	Ford - MCC
J and L Steel	

3. Maintain our present sales position at all of the following critical accounts.

GM - Central Foundry	GM - Pontiac
GM - Chevy, Bay City	Johnson Motors
GM - Chevy, Massena	Armco Steel
GM - Chevy, Grey Iron	Republic Steel
GM - Buick	Inland Steel

4. Increase Pydraul E Series prices a minimum of $.10/gal. across the board to add a minimum of $50M gross profit to the product line.

5. Implement a comprehensive Pydraul sales training program including an intensive, short term session as well as a continuing hydraulic fluid educational program for both new and experienced salesmen.

6. Develop strategies for the following multi-plant accounts where coordination of effort is critical to success.

General Motors	Armco Steel
Ford	Republic Steel
U. S. Steel	Bethlehem Steel
Alcoa	

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SANTOSAFE (WATER/GLYCOLS)

Product Summary

We entered the water glycol market with our Santosafe W/G products less than three years ago at the height of the price war between Houghton and Cities Service. Our success has been limited to those accounts already "presold" on Monsanto because of the Pydraul products and we are still a very minor factor in the market. Only limited success has been realized primarily due to lack of selling time because of the two reformulations we have experienced in the Pydraul area and because pricing has trended strongly downward making penetration very difficult. However, we have received numerous important approvals at major potential accounts and have a base on which to build a business which can contribute profit dollars with no capital investment.

Market Situation

The total water glycol fire resistant hydraulic fluid market in the U.S. is estimated at 30M pounds/year ($5.5 M/year) with minimal growth expected for the future. Pricing has trended strongly downward in the past 3-4 years due to the entry of Cities Service who chose to introduce products priced well below E. F. Houghton Company, the major seller of W/G

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hydraulic fluids. Pricing has now levelled out due to minimum profitability to all competitors and further significant price attrition is not anticipated. Houghton retains volume leadership in this market (60-70%) despite major setbacks in the steel industry due to Citgo products. The remainder of the market is split among Citgo (major), Stauffer (minor), Monsanto (minor), Sansone (minor), and the oil companies.

General Strategy

During 1973 priority will be given to Ford, major steel accounts and those customers where Pydraul usage will help presell Santosafe W/G. If successful in these areas, we will increase volume significantly (2-3 times) and lower raw material costs through negotiated volume discounts now in effect. We will sell at list prices wherever possible and meet (not lower) competitive prices when necessary to gain significant new business. We will call on Santosafe W/G potential accounts only if they use at least $20M/year of W/G products or if they are a synthetic fluid user as well as a W/G potential.

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1973 Goals

1. Sell the following Santosafe products in 1973.

	lbs (000's)	$ (000's)
Domestic	1525	215
Ex-U.S. Mfg.	300	80

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2. Concentrate sales effort on the following accounts who either use large W/G volumes or are substantial Pydraul customers* using a competitive W/G fluid. Increase year to year sales volume at a minimum of three of these customers.

Ford-Sheffield	Republic Steel*
Chevy-Massena*	Inland Steel*
Central Foundry - Bedford*	Caterpillar*
Delco Remy - Anderson, Ind.	Bethlehem Steel*

3. Gain volume discount from Union Carbide on Ucon water glycol concentrate purchased in 1973.

4. Achieve an overall gross profit level of 20% on the Santosafe W/G business as a whole.

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TURBINOL

Product Summary

Fire resistant gas and steam turbine lubricants have long represented a major potential market for synthetic fluids. Monsanto has sold Turbinol 153, a PCB-phosphate ester fluid, to Texas Eastern Transmission Corp. in the past but the product was not sold to other gas turbine users due to lack of acceptance by GE, the major gas turbine OEM. Withdrawal of PCB's has led to formulation of two all phosphate ester products, Turbinol 1122 and Turbinol 1223, which should be widely accepted in the marketplace provided field trials are successful. Our first trial, at Trans Canada Pipelines, is now underway on Turbinol 1122.

Market Situation

The market can be described in three distinct categories: gas turbine bearing lubricants, electro-hydraulic control (EHC) system fluids and steam turbine bearing lubricants. A fourth category is the military purchase of these types of fluids. The most significant potential to us is the gas turbine lubricant area which will develop in the next two years and will be perhaps the only significant part of the market to develop in the next 5 years. The large gas turbine

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department of General Electric will standardize on fire resistant lubricants in 1974 and initial fill of approximately 50 turbines/year @ 2,500 gal./turbine will mean business of approximately 125M-150M gallons/year equal to $0.5M. Make-up fluid to users will be in addition to this and is conservatively estimated at 50% of the initial fill volume per year.

Competition is primarily from Stauffer who have been working in the turbine fluid area for many years and have phosphate ester products operating in several gas turbines in the U.S. as well as supplying make-up fluid to some 50 turbines at Trans-Canada Pipelines. E. F. Houghton has candidate products but are not expected to be a major market factor due to (1) probable thermal stability problems with their products, (2) little background work in this market area and (3) the fact that they are only a reseller - not a producer. Oil companies, as resellers of phosphate ester products, are a possible market factor due to their interest in supplying all lubricants to power stations (to complete their product line) and have leverage (with gas pipeline companies) due to the fact they supply natural gas which has been in short supply to the pipeline companies.

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General Strategy

Because the turbine lubricant market is large and progress toward FR fluids slow, we must center our attention where action is being taken soonest. This is in the large gas turbine department of GE and we will concentrate our efforts on this group as well as those gas pipeline companies and utilities who have ordered turbines for delivery in 1974 and beyond. To influence these potential customers to use Turbinol we must successfully complete a field trial in a GE turbine. We will gain this necessary trial in at least one GE gas turbine at Texas Eastern in the spring of '73. In addition we will complete the Trans Canada trial in a Canadian Westinghouse turbine which will give added credibility to the Turbinol products.

Results of trials on Turbinol should bear out the fact that we have superior thermal stability to competitive products and we will exploit this fact with potential customers both during and after field trial of our products.

1973 Goals

1. Successfully complete and document trial results on Turbinol 1122 at Trans Canada Pipelines.

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2. Gain a trial in at least one GE gas turbine at Texas Eastern Gas Transmission Co. with Turbinol 1122 or 1223 and document trial results.

3. Write a complete sales action plan for the gas turbine market introduction of Turbinol lubricants and forward to field salesmen. This document to include:

   Background information--products, OEMs

   Market potential projections

   Specific accounts (with gas turbines on order) and action plan

   OEM concentration

4. Contact at least once in 1973 all customers (utilities or gas pipeline companies) of GE who have a large gas turbine on order for delivery in 1974.

5. Obtain military approval for Turbinol 1223 under MIL-H-19457B and bid on all future contracts.

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POLYPHENYL ETHER

Product Summary

Monsanto is the sole supplier of polyphenyl ethers in the world. Our major product is the five ring polyphenyl ether OS-124 although we can and have supplied four and six ring materials. Santovac 5 is OS-124, redistilled if necessary, sold only to the vacuum diffusion fluid market. Bendix (Consolidated Vacuum Corp.) holds a use patent on this application and we pay them a royalty on a per gallon basis. The polyphenyl ethers are high price, high profitability, long production time products. Their unique properties have made them of interest to many potential users and could eventually secure a larger market for them.

Market Situation

Although other companies are potential producers, Monsanto is the only polyphenyl ether supplier. Sales of OS-124, as is and as Santovac 5, are expected to be about 12,000 pounds ($300,000) in 1973. Since approximately six to eight months lead time is necessary to produce OS-124, careful attention to potential new applications is necessary to avoid short supply.

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Santovac 5 is sold directly and through distributors. Our main competitors are silicones sold by Dow Corning and distributors and our own polyphenyl ethers sold through Bendix (Consolidated Vacuum Corp.).

General Strategy

We will continue to aggressively market the five ring polyphenyl ether (OS-124) to present and potential users. We will consider the production of other polyphenyl ethers on a contract basis.

We will continue to sell Santovac 5 directly and through our distributors. We will make calls only on the largest accounts and our distributors.

1973 Goals

1. Sell the following Santovac/PPE products in 1973.

	lbs (000's)	$ (000's)
Domestic		
OS-124	2	45
Santovac 5	2	53
U. S. Export		
OS-124	7	178
Santovac 5	1	25

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2. Obtain long term forecast from major users of PPE product users to insure against supply problems on these products.

3. Complete market survey to determine what percentage of <u>new</u> vacuum diffusion pumps are being filled with Santovac 5. Change distributors if necessary to increase market share.

4. Develop low key ad program for PPE products and advertise in research/technical journal to try to stimulate interest. Continue/discontinue program based on responses.

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COOLANOL

Product Summary

The Coolanol fluids are a complete line of silicate ester base fluids used primarily as dielectric coolants in airborne government applications. They are specialty products for special uses and volume for any one use is small. Performance is a key factor in fluid selection both during system design and during use. Coolanol quality and performance have been good and relatively high prices have been paid by the users. Present design trends are toward higher performance levels combined with miniaturization. We will need to assess Coolanol properties under such conditions to assure continued success.

Market Situation

Coolanol fluids presently have 75% of the silicate ester portion of the airborne government market with Chevron Chemical having the rest. The silicate ester dielectric coolants compete in this market with air, water, water/glycol, fluorocarbons and silicones. Sales are drawn out over several years of design, development and production before significant amounts of fluid are delivered. The military are increasing the amount and the power/performance levels of electronics on both missiles and aircraft. In order to assure sales when the new equipment becomes operational, it is necessary to have Coolanol fluids

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specified at the design stage.

General Strategy

For current applications - and for related applications which primarily involve improved and up-dated equipment -- we will continue to supply the full lines of Coolanol fluids on which the applications were designed. For new applications we have been promoting Coolanol 20 and Coolanol 40 and planning to eventually phase out the older Coolanols. However, recent solids problems with Coolanol 20 will have to be resolved to continue this approach.

We will improve profitability by selectively raising prices. We will supply technical service on "as required" basis and primarily on a contract basis except as it will aid and expand our total silicate ester programs.

1973 Goals

1. Sell the following Coolanols in 1973.

	lbs (000's)	$(000's)
- Domestic	140	441
U. S. Export	10	45

2. Resolve Coolanol 15/Coolanol 20 solids problem and deude on future of Coolanol 20/40 program.

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3. Selectively increase prices on Coolanol fluids to raise gross profit to 50% minimum on all products.

4. Successfully bid (against Flo Cool 180) on Coolanol 25 requirements for electronic equipment on F-15/F-14 (McDonnell Douglas/Grumman).

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