

February 1965



Measure

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Canada's wood chip pipeline



from the chairman's desk

IN JANUARY WE HELD OUR ANNUAL management meeting in Monterey. This meeting is attended by all our corporate officers, as well as representatives of every operating division and subsidiary.

Preparing for this event requires that we carefully study our entire operation in order to evaluate our past performance and determine where and how we can do better in the future. Although 1964 was a good year, it would have been an unbeatable one if every group and every division could have performed as well as the best division did. That should be our goal.

We discussed the importance of improving our profit. Not that profit is important for its own sake, but simply because it is the best single measure of the contribution we are making in our chosen fields of endeavor. It is the foundation of future opportunity and security for everyone in our entire corporate family.

As mentioned in our annual report, we improved our profit after all expenses and taxes from 6.3 cents of every sales dollar in 1963 to 7.5 cents of every sales dollar in 1964. At Monterey we decided our margin could and should reach 8 cents in 1965. To do this requires that we be more selective in our development of new products. It requires that each new instrument we develop be more carefully designed and more carefully planned for production, so that when it is introduced to our customers it can be delivered without delay. It

also requires that everyone make an effort to upgrade quality and keep costs at a minimum.

In short, the only justification for a better profit is to make sure every instrument we deliver to a customer is a better instrument—better in design, better in quality, and backed up with better service all the way. This requires that everyone of us in the HP family do a better job than our competitors can do in every detail.

Another topic discussed at the conference was an analysis of our future markets. We agreed that our strong suit is electronic instrumentation, and that we should continue to concentrate our primary effort there. Within this broad field, we feel there are several areas where we might expand our activity. We reviewed projections for the defense market, which indicate that this will continue to be a most important market for many years to come.

Our studies clearly show there is ample opportunity for us to continue to contribute and grow in our traditional product areas and still enter exciting new markets.

I sensed at this meeting a great spirit of enthusiasm for the future. I sensed a conviction that the next twenty-five years hold for all of us even greater challenges and opportunities than we have had in the past quarter century. I am convinced that the future of each of us as individuals and all of us together as the Hewlett-Packard Company is limited only by our ability to get the job done.

David Packard

Toward the end of last month, more than 18,000 copies of the corporation's annual report were distributed to stockholders in fifty states and a dozen foreign countries. This is a task which has grown in magnitude every year since Hewlett-Packard first offered common stock to the public in 1957.

Compared with other corporate reports, the HP 1964 annual report is a rather unusual document from the standpoint that it speaks softly—in fact, it almost whispers — that the company has just completed a most successful year. This quiet, straightforward method of publishing year-end results is characteristic of HP, but in no way lessens the tremendous importance of information in the report. In fact, such things as “how many sales dollars did we take in” and “how were they spent” get pretty close to home when you consider that more than half of HP's employees own shares in the corporation.

□ In many respects, an annual report is something like a family confab about the hard-earned buck. Mom asks Dad how much he brought home out of his paycheck. Dad wants to know what it costs to run the household. And they both try to figure out how much is left over to buy a new refrigerator, pay for a vacation, or deposit savings for future needs. One big difference is that an annual report like HP's is replete with figures carefully generated by skilled accountants who understand and follow the laws regulating the publication of corporate financial data.

But even though accountants seem to talk a mysterious language—using words like amortization, contingent liabilities, and cumulative convertible preferred stock—they can speak with eloquent simplicity in numbers.

□ HP's 1964 annual report is testimony to this fact. In 16 pages it succinctly traces the company's financial course during the fiscal year which ended October 31. This course was clearly upward, as the figures prove. Sales of nearly \$125 million were 8 percent above 1963 and net profit of over \$9 million was an increase of 29

DOLLARS FOR PROGRESS

percent. These dollars contributed to the progress of the company in many ways. They provided funds for purchasing more and better equipment, new buildings, new acquisitions, raw materials. They paid the salaries of all employees, including 800 who were added to the payroll during the year. They financed one of the industry's most aggressive research and development programs and paid for the costs of advertising, sales, and all other marketing activities. In short, they covered all costs and provided a surplus to assure further progress for the company and its people.

□ All of these facts can be quickly and easily verified in the annual report—and you need not be a financial wizard to do so. Three of the report's financial statements, in particular, are of special interest to any employee, shareholder, or potential investor who wishes to gain broad information on the year. These are the balance sheet, the statement of income, and the statement of source and application of funds.

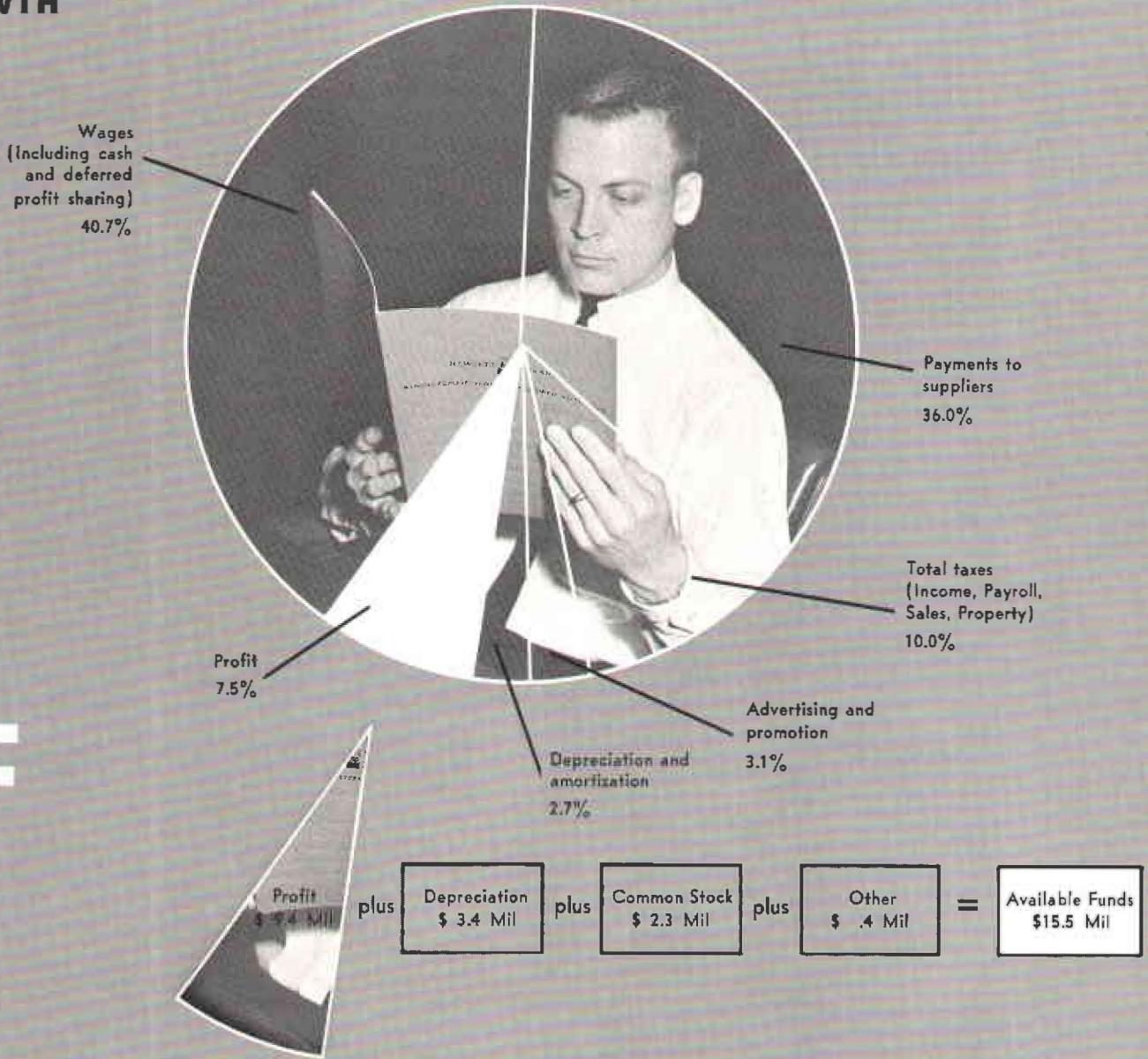
The balance sheet is something like a photograph. It presents a picture of what the company owns and what it owes as of a given date—in this case, October 31, 1964. The income statement, sometimes called a profit-and-loss statement, is of even greater interest to some investors because it provides a record of income and outgo for the entire year and states the net profit, a significant figure for predicting the future.

□ The statement of source and application of funds is sometimes overlooked by the casual report reader. It is, in essence, a record of the change in working capital during the year. In the case of Hewlett-Packard, working capital increased over \$7 million in the 12-month period.

The following two pages present the balance sheet from the 1964 annual report with special charts to illustrate where income was distributed and how working capital was increased.

DOLLARS FOR GROWTH

BREAKDOWN OF HP SALES DOLLAR (Approx.)



APPLICATION OF AVAILABLE FUNDS

Plant and equipment	\$ 7.3 Mil
Inventory increase	3.1 Mil
Cash increase	4.7 Mil
Div. to Pfd. Stk.	<u>.4 Mil</u>
	\$15.5 Mil

Everything we own that has a dollar value.

Things of tangible value which can be turned into cash in a short time, usually within a year.

Money in the bank and investment items such as government bonds.

Money owed to the company by customers and others, minus a certain amount to cover bad debts.

Carefully estimated value of raw materials we have on hand, partially completed products, and finished products not yet sold.

Advance payment for things which will benefit us in the future—like pre-paid insurance premiums.

Long term assets with tangible value—sometimes called fixed assets

The actual original cost of all land we own—not the current market value.

Actual original cost of all our buildings and equipment, reduced by a formula to allow for wear and tear.

Miscellaneous assets such as deferred product development cost and good will.

Sum total of the things we own.

What we owe, plus shareholders' equity in the business.

Short term obligations—usually due within a year.

Money borrowed from banks for short periods.

Money owed to vendors for supplies, etc., plus money owed but not yet due.

An amount set aside to pay our tax obligations when they come due.

Equity of minority stock holders in partially owned subsidiaries.

This section tells what shareholders own—their equity.

Ownership share having priority over common stock ownership in payment of dividends; distribution of assets in cases such as mergers and liquidations.

Like preferred stock, common stock is evidence of ownership in the company. Each unit—or share—constitutes a vote which you exercise by attending stockholders meetings or by signing proxy statements.

Excess, over par value, of \$1 per share, of purchase price of common stock.

Earnings from operations through the years which have been retained in the business.

ASSETS

CURRENT ASSETS:

Cash and marketable securities	\$ 9,596,779
(Notes and accounts receivable less provision for losses in collection—1964—\$84,493	19,517,189
(Inventories	28,437,098
(Deposits and prepaid expenses	1,181,387
TOTAL CURRENT ASSETS	\$58,732,453

PROPERTY, PLANT, AND EQUIPMENT:

(Land	\$ 2,049,776
(Buildings and equipment, less accumulated depreciation and amortization: 1964—\$13,659,811	22,054,450
TOTAL PROPERTY, PLANT, AND EQUIPMENT	\$24,104,226

OTHER ASSETS

(TOTAL	\$ 2,662,626
(TOTAL ASSETS)	\$85,499,305

LIABILITIES

CURRENT LIABILITIES:

(Short-term notes payable	\$ 2,240,122
(Accounts payable and accruals	9,988,239
(Provision for federal and foreign taxes on income	5,481,521
TOTAL CURRENT LIABILITIES	\$17,709,882

(MINORITY INTERESTS

(TOTAL	\$ 433,042
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(CAPITAL STOCK & SURPLUS:

(Cumulative convertible preferred stock, par value \$1.00 a share; authorized 450,000 shares; issued and outstanding: 1964—444,508 shares	\$ 444,508
(Common stock, par value \$1.00 a share; issued and outstanding: 1964—11,452,387 shares	11,452,387
(Paid-in surplus	11,692,003
(Earned surplus	43,767,483
TOTAL CAPITAL STOCK & SURPLUS	\$67,356,381

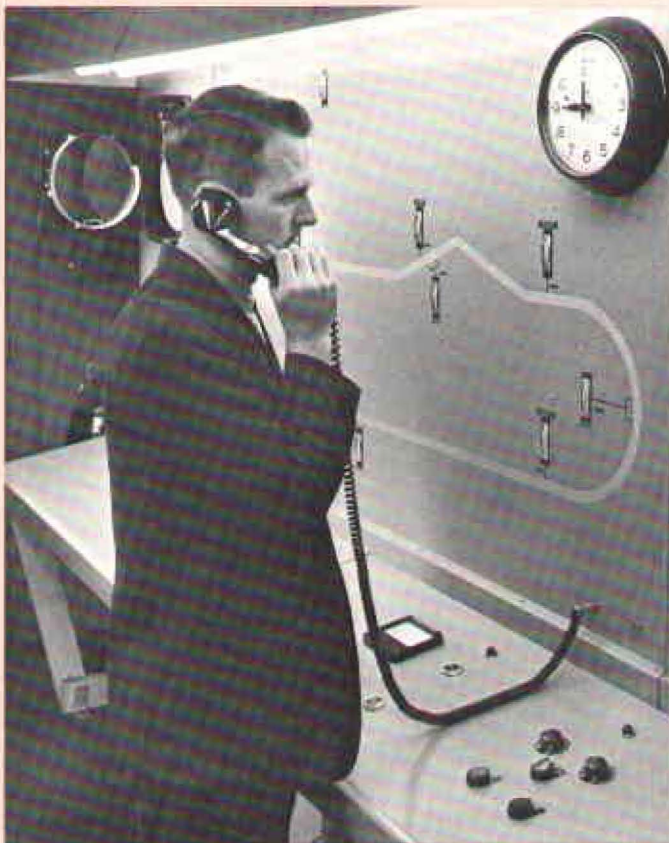
(TOTAL	\$85,499,305
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Sum total of the things we owe, plus capital stock and surplus from all sources.

Dymec system speeds wood chip pipeline test



Operator stands at control panel where diagram shows layout of pipeline system and data check points.



Canada's largest industry—pulp and paper manufacturing—may well be on the verge of a major revolution as the result of a recent experiment in transporting wood chips through a pipeline.

For the sentimental, the prospect of piping chips from forest to factory instead of floating giant logs along the traditional river system is about as desirable as a freeway through Central Park. But for a nation with an eye toward the future, such an innovation could mean undisputed world leadership in pulp and paper production.

The experiment, financed by nearly a dozen companies, took place over a ten-week period last summer at Marathon in northwestern Ontario, under the guidance of the Pulp and Paper Research Institute of Canada. The results are still being studied and will remain confidential, but the Institute has suggested that everything went better than expected.

The pilot plant at Marathon consisted of a pneumatic pipeline delivering wood chips, a conveyor to carry the chips to a tank for mixing with water, and three separate 2,000-foot sections of pipeline with attendant pumps, valves, and meters. The line itself was laid out with bends and inclines to simulate extremes in terrain.

Automated data collection and processing equipment enabled the project team to collect an enormous amount of information in a very short time as the water-wood chip mixture flowed through the pipe. Years would have been required to collect the same data using conventional methods of measurement, computation, and analysis.

A Dymec 2010B data acquisition system served as the central piece of electronic equipment at the test site, where it was used to log a variety of signals received from check-points throughout the pilot plant. Many operating variables were gathered for use in the future by designers who will want to know such things as optimum pipe diameters for a given situation, flow speeds, pump pressures, and probable pipe wear rates.

THE COVER—An over-all view of the pilot operation shows the inclined conveyor used to feed wood chips into a mixing tank at the beginning of the pipeline. Two railroad cabooses housed electronic data recording, collecting, and transmitting gear. Photos courtesy of Pulp and Paper Research Institute of Canada.



Eight-level tape from the Dymec 2010B system was transmitted 800 miles to Montreal where identical tape was produced and fed into computer.

Each day during the experiment, as the Dymec system punched out the information on 8-level tape, it was transmitted 800 miles to Montreal by long-distance telephone on equipment which could switch from voice messages to data pulses. There, at the Institute's Pointe Claire headquarters, an identical tape was punched out and fed into a computer.

The computer made its analysis and produced an output tape for retransmission to a teleprinter in Marathon, where a permanent record was made. A typical day's run involved recording data for a total of fifteen minutes over a period of two hours of pipeline operation. The Dymec system and remote computer worked at such great speed that complete information on a day's tests could be on hand in thirty minutes or so after tests were completed. During the ten-week experiment, 50 runs were recorded involving over 250,000 readings.

□ The experiment, which stands as the first sizeable pilot-scale attempt to transport wood chips by pipeline, has far-reaching significance for Canada and for the entire pulp and paper industry. When combined with projected new

mechanical tree-harvesting methods, the cost of woods operations may be cut in half. Industry officials foresee the time when a tree deep in forest lands can be lifted from the stump, processed into chips, pipelined long distances to a pulp mill, made into paper, and shipped to the consumer—all within a day or two.

□ By providing a year-around flow of chips, regardless of weather conditions, the pipeline system will enable the mill owner to maintain a steady rate of production and to reduce his raw materials inventory. Transportation costs will be less, thus permitting a reduction in the price of finished paper products. Pulp mills can be located closer to major markets instead of near wood-cutting regions. Species of trees which are not suitable for river transport can be piped without loss. And small-diameter wood, now wasted, will be used.

Add up all these benefits—plus several others that could be mentioned—and it would seem that Canada's number one industry has found a direct pipeline to a brilliant future.



Legal documents confirming the agreement are signed by Bill Hewlett, HP president, and by James Bowles, Datamec president.

Datamec to become HP subsidiary

IN MID-JANUARY, HP ANNOUNCED an agreement with Datamec Corporation whereby Datamec will become a wholly-owned subsidiary through an exchange of stock. The effective date of the proposed combination is June 30, 1965.

Datamec, located in Mountain View, California, manufactures digital magnetic tape units and other electromechanical equipment for data acquisition and processing. The firm's products are sold throughout the United States and in several foreign countries.

Founded in 1961, Datamec has 60 employees and in 1964

had sales of approximately \$1.3 million. The company's principal officers are James D. Bowles, president; Jack F. Sweeney and Ray S. Stewart, vice presidents.

Under terms of the combination agreement, Datamec will retain its present management and its 15,000-square-foot plant at 345 Middlefield Road, Mountain View.

In his announcement of the agreement, David Packard, HP Board Chairman, pointed out that the Datamec devices which are used in the data processing and computer fields will enable HP to broaden and diversify its product line.

Scotland site located

LAND FOR A NEW HP PLANT in Scotland has been located at South Queensferry, eight miles west of Edinburgh. The 16-acre site is perched on a hill only a short distance from the Firth of Forth.

The plant, which will house HP Ltd. manufacturing and administrative operations now centered at Bedford, England, is being planned as a multi-building complex. Construction of the first 80,000-square-foot unit will begin late this spring and completion is scheduled for a year later.

Phil Towle, corporate plant engineering manager, recently returned from an inspection of the area with much praise for the site location, the Scottish people, and the living facilities available to employees at the plant. A park and new school are planned for property located next to the site.



View from plant site overlooking Firth of Forth, and bridge which bears striking resemblance to Golden Gate. WW II gun emplacement, center foreground, protected railroad bridge out of photo to right.

Two sales divisions consolidate

ON THE FIRST of this month, the people in the Lahana Sales Division started marching under a new banner. That division, headquartered in Denver, has been consolidated with the Neely Sales Division as another move within the corporate sales organization to improve efficiency in administration and staff services.

The personnel and facilities of the former

Lahana organization will remain unchanged. Eventually, several administrative functions, such as accounting and inventory control, will be centralized.

The Neely Sales Division now includes a vast territory covering the eleven Western states, and the states of Alaska and Hawaii.

ONE OF THE MOST IMPORTANT POINTS brought home throughout the recent HP Monterey Management Conference was the wide opportunity for continued growth and improved profits.

While we made significant strides in these directions in 1964, there is still much room for progress. Improvement of operating efficiency and exploitation of new market areas through a broader product line give us a wider horizon to do a bigger and better job this year.

Immediately after the Monterey conference, we held a series of management and planning conferences at the various plant locations. The purpose of these meetings is to pass along the word on corporate planning and goals as established at Monterey, and then get down to work on divisional plans and objectives. In addition to the key people in the various divisions, corporate officers often take part in these meetings.

□ At Palo Alto things are humming. Progress on the new building at the Stanford plant has been hampered somewhat by the heavy winter rains, but we still anticipate completion by the end of the year. Plans for the new Paeco plant are on the drawing board, and we expect to start this construction in a couple of months. Paeco's role will be expanded to include other components in addition to its regular line of transformers and magnetic devices.

Our recent acquisitions in the Palo Alto area are really moving. Delcon and Datamec (the latter to officially come on board this summer) both have excellent new product programs and are expected to show a very high rate of growth and profit this year. ICM is in the process of installing its first pilot data-handling system for a large chain store. We expect a lot of activity from this small but growing operation this year. Mechrolab is under new management, and its field marketing group has been integrated into the HP marketing organization.



Noel E. Porter, Vice President, Operations

We're moving on the double

□ The Colorado plants hosted the winter sales seminar group for the first time last month, and did a good job of impressing the participants with their new product programs and their enthusiasm. Down at Moseley, business continues at a strong growth rate. The new electrostatic hold-down platen for the X-Y recorders has met with excellent customer acceptance. We expect to do a large and profitable-plus business in retrofitting older models. To supply this demand, plus the requirements for current production, we've tooled up to do a most efficient job of fabricating this component.

The East Coast operations have also gotten off to a good start this year. Harrison continues to expand its line of power supplies, assuring steady, long-term growth. Boonton is moving ahead, largely because of its new DME measuring system which is being adopted widely in the aviation industry.

□ Over the past year, Sanborn has undertaken a necessary and widespread reorganization of its management structure. The basic functions of engineering, marketing, and manufacturing have been greatly strengthened to provide a more effective and efficient operation. The order picture at Sanborn is excellent, and the division has the largest backlog in its history. The job ahead is mainly one of delivering quality products to waiting customers, and this they are doing.

The fastest growing segment of our total business continues to be International. We are continuing to expand our activities to new countries and customers. The outlook here is such that we can expect the total volume of sales by 1970 to be of the same order of magnitude that our entire corporation recorded in 1960.

While the final figures aren't in yet, our first quarter performance is well ahead of the same period last year, and ahead of our level of operations for the last six months of fiscal year 1964. We're extremely enthusiastic about the outlook for 1965, and feel we are off to a good running start.



An incomparable array of HP engineering talent is represented by this photo taken during the week of January 11 at the Stanford plant in Palo Alto. The meeting was attended by division engineering managers from around the world, senior staff engineers, engineering section leaders, division managers, and various department heads. Several presentations on advanced technology were given, along with talks of general interest about affairs of the company, and workshops were held on engineering management.



Ernie Brioza (right), corporate tax manager, hands over a check to Herb Drake of Crocker-Citizens National Bank for deposit representing HP's 1964 contribution to the Employees Profit-Sharing Retirement Trust. The amount—\$2,078,654—brings the fund total to well over \$14 million.

Winter sales seminar

HP sales people started the year on a high note of enthusiasm during a series of meetings January 18-23. For the first time, this semi-annual seminar, which involves half the sales force, was held in both Colorado and California. This provided an opportunity for sales engineers to talk with key divisional, plant, and headquarters people right at the scene of action.

The first two days of the seminar were held at Loveland and Colorado Springs. Then, on Wednesday, the group traveled to Palo Alto for a dinner meeting highlighted by an address by Dave Packard.

On Thursday morning, Noel Eldred, marketing vice president, outlined the sessions for the remainder of the week, which included talks by a number of corporate department heads and briefing sessions on Dymec, Moseley, Microwave, and Frequency & Time division products. Other sessions covered new products for the chemical industry and discussions of refinements in customer service.

Nearly 80 key field engineers were involved in the seminar. The other half of the field sales force will attend a similar seminar in June.



people on the move

HP PALO ALTO

Doug Austin, Advanced R&D—to in-plant engineering, Frequency & Time Division.

Mason Byles, central Quality Assurance—to manager, central Quality Assurance.

John Hartman, scheduler and expeditor—to master scheduler, Microwave Division.

Bill Johnson, customer service accounting—to Palo Alto finance group.

George Moore, systems and procedures group—to computer programming.

Pete Pizzino, Advanced R&D—to lab support, Frequency & Time Division.

Duane Schar, tabulating—to programming, Systems and Operations group.

Jim Shimer, advertising and sales promotion—to product training, corporate Marketing.

Ed Truitt, manager, CRT, Dymec Division—to manager, process engineering, corporate Manufacturing.

Wes Wickham, master scheduler—to sales administration services, Microwave Division.

DYMEC

Bill Abbott, manager, central Quality Assurance—to supervisor of system manufacturing and specifications, modulation group, Dymec Division.

Ralph Manies, technical writing—to systems Engineering.

Bill Thormahlen, central Quality Assurance—to division Quality Assurance, Dymec Division.

Don Willett, engineering lab—to applications engineer, Sales Department.

LOVELAND

Norm Borges, traffic coordinator, customer service—to traffic manager, Loveland Division.

MECHROLAB

Stan Davis, medical instrumentation marketing, Beckman Instruments, Spinco Division, Palo Alto—to administrative assistant to Marketing Manager, Mechrolab Division.

NEELY

Gordon Angus, reliability engineer, Electronic Specialty Company—to staff engineer, Neely North Hollywood office.

Leon Hamner, staff engineer—to field engineer, Neely North Hollywood office.

Jack Jung, engineer, Calbest Electronics—to staff engineer, Neely North Hollywood office.

Pete Lahana, division manager, Lahana Sales Division—to Rocky Mountain area manager, Neely Englewood office.

Jim Rankin, manager of chemical instruments, Mechrolab—to chemical instrumentation engineer, Neely San Carlos office.

Lee Stoner, field engineer, Lahana Sales Division—to medical sales representative, Neely Englewood office.

Lincoln Young, staff engineer—to administrative engineer, Neely North Hollywood office.

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Measure

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"I often say that when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind . . ." LORD KELVIN (1824-1907)

*Let us hope . . . that by the best cultivation of
the physical world beneath and around us, and the best
intellectual and moral world within us, we shall secure
an individual, social, and political prosperity and
happiness, whose course shall be onward and upward, and
which, while the earth endures, shall not pass away.*

Abraham Lincoln
1809-1865

*Of all the dispositions and habits
which lead to political prosperity, religion
and morality are indispensable supports.*

George Washington
1732-1799