

profile...

In seven years Phillips has become a leading nitrogen producer, growing rapidly through product diversification and raw material upgrading. Next step: full fertilizer integration by adding potash

NOW IN SECOND place among the nation's top nitrogen producers, Phillips Chemical Co. is moving forward by leaps and bounds. For many years the company has maintained a strong position in the manufacture of petrochemicals, including synthetic rubber. A leader in carbon black manufacture, Phillips makes raw materials for synthetic fibers. But its fertilizer production alone adds up to an impressive total, both tonnage-wise and dollar-wise.

When formed in 1948—as a wholly-owned subsidiary of Phillips Petroleum Co.—the organization sold only 25,580 tons of fertilizer. By 1954, sales had skyrocketed to 591,000 tons, compared with 360,000 tons marketed the previous year. Sales for 1955 will ring up a new record—an estimated 814,000 tons. Dollar volume of sales during the first half of 1955 jumped 35% over the same period in 1954.

The history of Phillips Chemical is one of product diversification, a company passion for upgrading raw materials, and clever integration of its activities with those of the parent organization. Phillips Petroleum, nation's largest producer of natural gas, gathers and delivers over 2.25 billion cubic feet of gas per day, including that processed and consumed in company operations. Its chemical subsidiary manufactures anhydrous ammonia, aqua ammonia, ammonium sulfate, ammonium nitrate, nitric acid, and nitrogen solutions from natural gas. Sulfur recovered from hydrogen sulfide provides almost half of its sulfur requirement to make ammonium sulfate and triple superphosphate.

Phillips owns one-fourth interest in Farmers Chemical Resources Development Corp. The firm plans to mine and process potash in a 13,000-acre New Mexico prospect (Lea and Eddy counties). Although Kerr-McGee Oil Industries owns one-fourth and National Farmers Union Service Corp. one-half of the new venture, Phillips has the right to take up to one-half of the potash produced. Potash would add the third main plant food element to the company's products.

Phillips is also developing agricultural outlets for its natural gas in other

parts of the country. It recently joined with Pacific Northwest Pipeline Corp. to form Phillips Pacific Chemical Co., which will build a 200-ton anhydrous ammonia plant in southeastern Washington. The company plans to have fertilizer available for distributors in the Intermountain, Inland Empire, and Pacific Northwest regions for the spring season of 1957. Pacific Northwest Pipeline will transport 15 million cubic feet of natural



Chief Executive Officer . . .

K. S. Adams

Product diversification and integration
gas daily to the plant site from the San Juan Basin of northwestern New Mexico and southwestern Colorado.

Frank and L. E. Phillips started the petroleum company in 1903 with the purchase of a few oil and gas leases. World War I upsurge in petroleum demand led them to incorporate in 1917. Under K. S. Adams, who succeeded Frank Phillips as board chairman, the company concentrated during World War II on military aviation gasoline, butadiene, carbon black, and chemicals. This and operation of the Government-owned butadiene plant at Borger and ammonia plant at Etter led Phillips to set up its chemical operations under Phillips Chemical Co.

Phillips Chemical immediately embarked upon an expansion of anhydrous ammonia production at Etter, doubling capacity to 400 tons in 1949; the plant now has a rated capacity of 500 tons. Phillips began to eye ammonium nitrate markets in the Corn

Belt, then moved ahead with its first nitric acid plant in January 1950 (capacity: 220 tons per day). Business grew, additional units finally increased production to 355 tons. Phillips brought its first ammonium nitrate unit, 325 tons per day, on stream in August 1950, then raised capacity to 390 tons in 1953. It added a nitrogen solutions unit, producing 150 tons daily.

The company purchased Todd-Houston Ship Building Corp.'s former site near Houston, Tex., from the Government in September 1948, and by January 1949 had a new ammonium sulfate plant in operation. With a 550-ton-per-day plant, Phillips pioneered ammonium sulfate in the area. The Adams Terminal plant, expanded in 1953, has a daily capacity of 1000 tons.

Adding to its nitrogen production, Phillips constructed a 450-ton anhydrous ammonia plant at Adams Terminal in December 1953, doubling company-wide capacity. The ammonia plant, now at rated capacity of 485 tons per day, receives natural gas from the company's reserves in the nearby Chocolate Bayou field through a 31-mile pipeline. Phillips added another plant food element to its line of products with the completion of the 405-ton triple superphosphate plant at Adams Terminal in January 1954.

To bolster its position during the years of sulfur shortages, Phillips installed a recovery plant at Goldsmith, Tex., in February 1952. The plant is rated at 100 long tons daily. Before year-end, Phillips had completed another sulfur plant (50 long tons) in Crane County, Tex. Since initial operation in August 1952, the Crane County plant has been expanded to 85 long tons per day.

Strong Market Position

Phillips operates no ammonia distribution stations, but leases those it owns. Its sales policy is based on marketing through independent distributors. In the early development of ammonia sales, Phillips created a strong market position by helping distributors obtain large storage tanks during the steel shortage. When deliveries were running a year late, Phillips would order in advance as many as 100 tanks, making tanks available to distributors when the latter started up in business. The company added almost 1000 ammonia distribution stations in Nebraska, Wyoming, Montana, South Dakota, and Kansas by purchasing all the capital stock of Curry Chemical Co. (and 14 affiliated companies) in October 1954. A year later, Phillips sold the former Curry Chemical fertilizer

Phillips Chemical Co., second largest producer of nitrogen in the U. S., occupies a strong position in the manufacture of other petrochemicals. Company operations include:

- Plains butadiene plant at Borger, Tex., which manufactures butadiene, a major component of synthetic rubber.
- Plains copolymer plant, adjacent to the butadiene plant, which produces numerous types of synthetic rubber polymers.
- Philback plant at Borger, Tex., the world's largest plant producing furnace black from oil. Furnace black is used principally for compounding with synthetic and natural rubbers in the manufacture of tires.
- Adams Terminal pyridine plant near Houston, Tex., for the manufacture of methylvinylpyridine. Originally developed for use in the production of a new synthetic fiber, methylvinylpyridine may have even more important uses in new synthetic rubbers, plastics, and other products.
- *p*-Xylene plant near Big Spring, Tex., that manufactures *p*-xylene for the production of a synthetic fiber (Dacron).
- Adams Terminal polyethylene plant under construction on the Houston Ship Channel, to produce 110 million pounds annually of Phillips' new family of low-pressure olefin polymers, trademarked Marlex. For the manufacture of Marlex thermoplastic, to begin in mid-1956, Phillips is building a 120 million pound ethylene plant near Sweeny, Tex.

mixing plant at Scottsbluff, Neb., to Simplot Soil Builders, Inc., of Boise, Idaho. Company officials, in announcing disposal of this plant, stated that their primary interest in the fertilizer industry is supplying raw materials to mixed fertilizer manufacturers and

bulk ammonia distributors rather than selling at the dealer and retail level.

Phillips has dual usage of the parent company's tank cars. High pressure cars haul ammonia and lesser amounts of LP gas in the summer, less ammonia and a great deal of LP

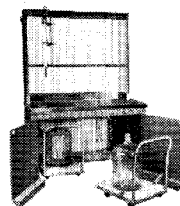
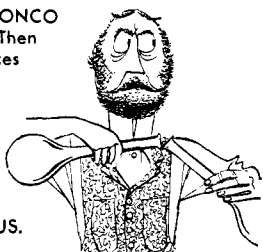
gas in the winter. Phillips partially solves seasonal ammonia demands by converting almost half its output into solid fertilizer which can be readily stored. This also enables the company to meet the most profitable market opportunities. Its sales organization is actively pushing fall use of ammonia, which is increasing.

Large ammonia storage is necessary, however, so that the company can continue plant production on an even schedule and adequately serve its customers. Phillips now has 649,000 barrels of ammonia and aqua ammonia storage space, both above and under ground, and is adding more. (Underground storage in a salt formation at Etter, the first of its kind, was completed in 1953.) A 323,000 barrel aqua ammonia tank which the company is building at its Cactus works will be one of the largest steel storage tanks in the world.

Phillips is the only ammonia producer in the U. S. that stores large quantities of aqua ammonia, then converts it back to anhydrous material during the sales season. To avoid overloading its converting equipment, Phillips begins this operation in advance of the rush season, using tank cars for temporary anhydrous storage. When orders come in, the cars are ready to roll.

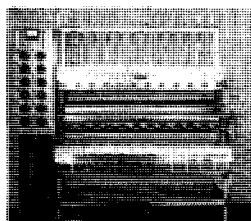
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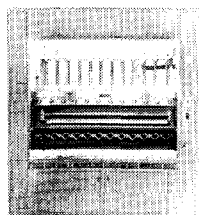
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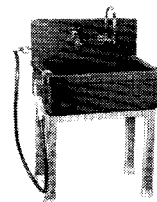
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