

In 1985, Chevron Resources Company owned and operated an open pit phosphate mine and mill 11 miles north of Vernal, Utah. At that time, the plant produced 500,000 tons per year of concentrate and had the capacity to produce 750,000 tons per year. The operation was about to be expanded to 1,300,000 tons per year of concentrate in order to supply a new fertilizer plant being constructed by Chevron Chemical Company in Rock Springs, Wyoming. A 10-inch, 96-mile pipeline was being built to transport the concentrate from Vernal to Rock Springs.

In 1993, the Vernal phosphate rock concentrator was located in the Uinta Mountains near Vernal, Utah. Ore was **sedimentary** rock from the Phosphoria Formation. Truck and shovel mining was done at a rate of 11,500 tons per day. Run of mine ore was crushed and then milled through a SAG mill and ball mill to minus 16 mesh. Milled ore was deslimed using cyclones and hydrosizers. Sands were conditioned with fatty acid, petroleum sulfonate, diesel fuel and frother prior to primary rougher and cleaner flotation. Primary flotation tailing was milled to 95 per cent minus 48 mesh, deslimed in cyclones, conditioned using reagents previously described, and then processed through rougher and cleaner scavenger flotation. Product of scavenger cleaner concentrate was upgraded by reverse flotation of dolomite. Flotation concentrates were combined and dewatered, pulp being milled to 99.5 per cent minus 65 mesh and then thickened to 65 per cent solids. Product was pumped from storage through a 10 inch, 94 mile pipeline to a conversion plant at Rock Springs, Wyoming. Mill tailing was stored behind an earthen dam, water from the settled tailing being reclaimed for mill use.

As of 1997, the mine near Vernal was being operated by S. F. Phosphates Limited Company.

"The original SF Phosphates mine--near Vernal, Utah--was developed by the San Francisco Chemical Company in 1960. Chevron Resources Company purchased the mine in 1981, and in 1984 began construction of the slurry pipeline and the fertilizer manufacturing plant near Rock Springs, Wyoming. Chevron's plant and pipeline operations were underway by 1986. Spring of 1992 saw the formation of SF Phosphates Limited Company with the purchase of the mine, pipeline, and fertilizer plant in a joint venture between the J.R. Simplot Company and Farmland Industries, Inc. In 2003 the J.R. Simplot Company purchased Farmland Industries' interest in the operation, renaming it Simplot Phosphates, LLC." ([Simplot Phosphates, LLC brochure](#), which includes a well-done illustration of the fertilizer making process)

## Western Phosphates at Garfield

September 30, 1952

Firm Name Chosen -- Western Phosphates, Inc., has been chosen as the name for the new multi-million dollar treble superphosphate fertilizer plant which will be erected near Garfield, Utah. Participating in the company are Stauffer Chemical Co., and Garfield Chemical and Manufacturing Co. (jointly owned by American Smelting and Refining Co. and Kennecott Copper Corp.). Building permits for the plant -- to be completed in 1953 -- have been issued by Salt Lake County. Five in number, they total \$9,850,000." (*Salt Lake Tribune, September 30, 1952*)

December 1953

Western Phosphates, Inc. opened its new fertilizer plant at Garfield, as the first plant of its kind in Utah. (*Deseret News, December 16, 1953*)

The following information about the destination of phosphates loaded on UP's Park City Branch, comes from a 2005 EPA report about environmental issues at Kennecott, both at and near Garfield, and the Bingham canyon mine. The report was obtained by a FOIA request.

The Chevron phosphate fertilizer plant was created as a joint venture between Stauffer Chemical Company, American Smelting and Refining Company, and Kennecott Copper Corporation. The project began in 1952 with partners incorporating under the name of Western Phosphates, Inc. Kennecott supplied the land (749 acres), which was deeded to Western Phosphates; ASARCO supplied the sulfuric acid; and Stauffer was designated as plant operator.

