Mill Canyon Mine
(Wooley Valley Unit #4)

The Mill Canyon Mine, part of the Wooley Valley Mine complex, is located on Federal Lease I-04374 in Sections 11, 13, and 14 of T. 7 S., R. 43 E. (Figure 144). The earliest known phosphate related activity occurred in 1912 when geologists of the USGS mapped and trenched the phosphate rock in the township. No trenches were excavated in the area of the Mill Canyon Mine, however, extensive geologic mapping disclosed a northwest-plunging anticline (Mansfield, 1927). This plunging anticline forms a “nose” and would become the centerpiece of mining in the future mine.

An expression of interest in leasing these deposits of phosphate was made in the early 1950's, and on May 6, 1953, the BLM conducted a lease sale for these lands. The J. A. Terteling and Sons Company was the successful high bidder and was issued Federal Lease I-04374 on September 1, 1953. The J. A. Terteling and Sons Company conducted exploration trenching and drilling on the lease but did not develop the deposit for mining. On April 1, 1959, the lease was assigned to the Terteling Land Company, an adjunct to the original Terteling lessee.

With all intents to develop the mine, the Terteling Land Company contracted with and designated the Stauffer Chemical Company as the mine operator on July 1, 1966. No timely mining development occurred, and on July 1, 1967, the lease was assigned to the Stauffer Chemical Company after the Terteling Company divested themselves of all of their phosphate holdings in southeast Idaho.

The Stauffer Chemical Company began stripping overburden in the mine area in late 1968, with actual mining of phosphate ore starting in the summer of 1969. The Stauffer Company designated the Terteling Land Company as the operator of the mine and that company immediately subcontracted all stripping, mining, hauling, and loading to the MacGregor Triangle Company. Mining started on the west limb of the plunging anticline. Mining on that limb soon proved to be a disappointment because the phosphate ore was badly broken and contaminated with limestone blocks. This required a rapid switch in mining to the east limb which had not been prepared in 1969.

Along with the advent of mining in 1969, the year also saw the construction of a conveyor belt from the mine area to the railhead (Figure 145). The belt was 30 inches wide and aligned in two segments down the hillside for a total distance of about 4,200 feet, an elevation drop of about 700 feet. Ore was fed from the stockpile area at the mine by a short 36-inch wide belt into a hopper over the tail piece of the long belt (see Figure 145). A surge bin was located at the lower end of the long belt from which the railroad cars were loaded from another 48-inch wide elevated belt. The whole conveyor system was rated at about 600 tons per hour. Scrapers brought the ore to the stockpile and bulldozers were used to load material onto the conveyor belt feeder assembly.

Stripping of the overburden in the “nose” area of the plunging anticline started early in July, 1971 with mining starting July 12, 1971. In November, 1971, the mine operator placed about 80,000 cubic yards

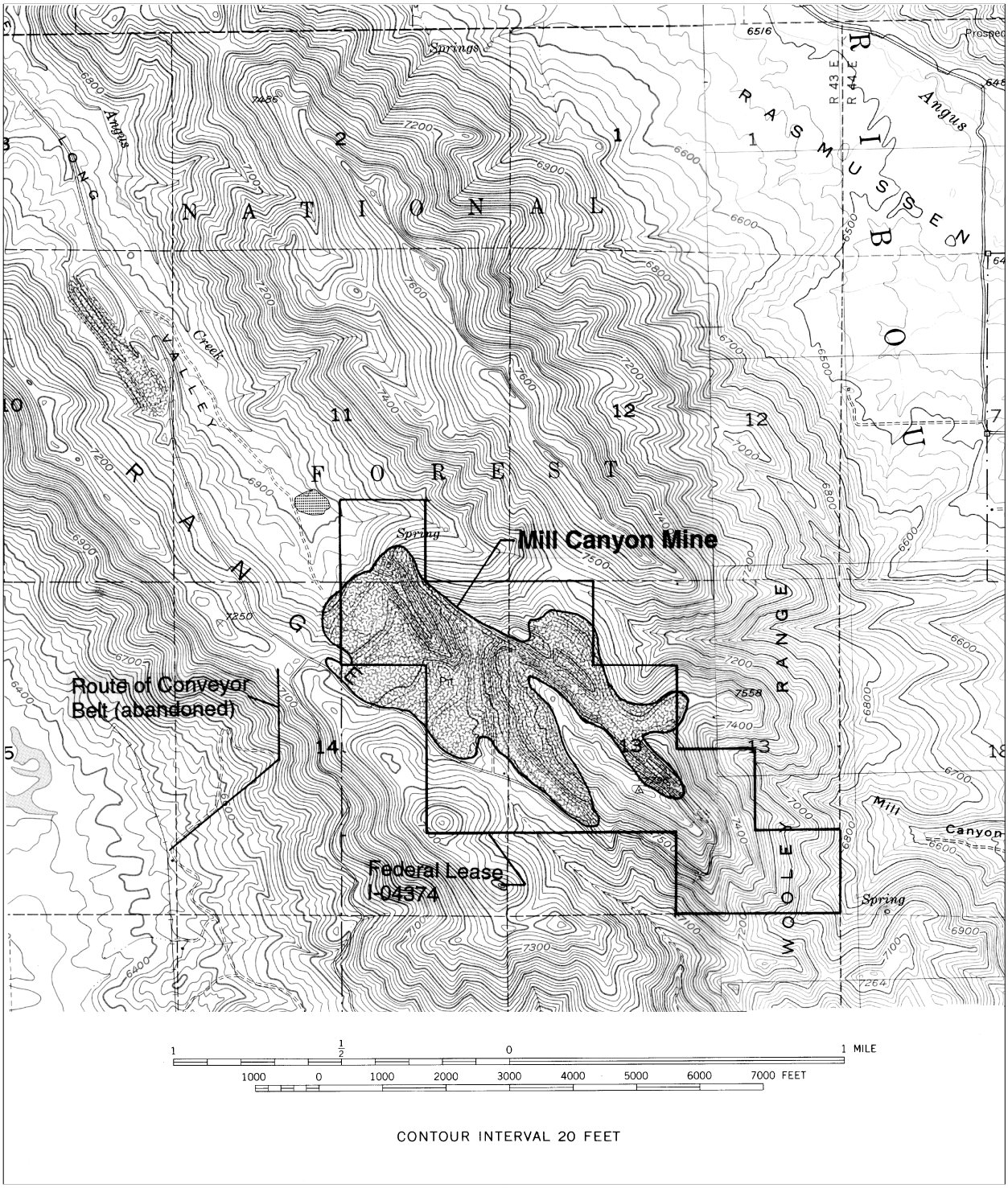

Figure 144. Map showing the location of the Mill Canyon (Wooley Valley #4) Mine, Caribou County, Idaho.

Figure 145. Ore conveyor belt, Mill Canyon Mine, July 30, 1975. BLM file photo.

of waste, ice, snow, frozen ore and frozen mud on the crest of Dump #4, raising the elevation of the dump by about 15 feet. This material was later pushed over the side of the dump. Toward the last part of June, 1972, the material thawed and ran down the face of the dump and into the wooded area below. Silt overfilled the retention ponds and spilled over and went into Angus Creek. There were mudflows coming from the dump that were approximately 600 feet long by 70 feet wide and three feet

deep. This dump failure caused a great amount of anxiety on the part of the mine operator, the mine owner and government officials. A large effort was made to restabilize the dump by removing about 20 feet from the top of the dump and all of the loose material on the face of the dump. Benches were cut into the face and total reshaping and reseeding of the dump was done, and by 1973, the work resulted in stabilizing Dump #4 from any further failures (Figure 146).

Figure 146. Dump No. 4, Mill Canyon Mine, September 7, 1973. BLM file photo.

Eventually, the Mill Canyon Mine consisted of two large pits, six waste dumps and one sub-ore pile, and approximately 2½ miles of haul and service roads (Figures 147 and 148). Surface structures

Figure 147. "The Nose" area, Mill Canyon Mine, 1975. BLM file photo.

Figure 148. Mill Canyon Mine, view east, showing haul road and conveyor belt, July 18, 1984. BLM file photo.

included two metal buildings, an office frame building, office trailer, lunchroom trailer and a repair facility. All of the production of this mine was shipped to the Stauffer Chemical Company plant in Silver Bow, Montana, for use in manufacturing elemental phosphorous (Hansen, 1968).

By September, 1974, all of the minable ore had been removed from the mine. Reclamation of the pit areas and the dumps was in full swing (Figure 149). Some ore remained on the east end of the lease near the Mill Canyon drainage, but it may not be economically recoverable.

As outlined previously in this report, the Stauffer Chemical Company's Idaho operations were sold in 1985, and through a chain of buyers, eventually would up in the hands of the Rhône-Poulenc Basic Chemicals Company. Rhône-Poulenc assigned the mine to a subsidiary, Rhodia, Inc.,

Figure 149. Mill Canyon Mine reclamation, view north, July 30, 1975. BLM file photo.

and that company is the current lessee of record of I-04374.