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SULPHUR MINERS PLAN 11-MILE TRAMWAY ON MOUNT ADAMS

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An unique exploration has been carried on in the prospecting of a sulphur deposit at an altitude of more than two miles on Mount Adams. An almost unbelievable feat has been accomplished in the packing of supplies and machinery, establishment of a camp and the diamond drilling of a mountain crater.

This snow-capped peak of southern Washington, long referred to as "the lost mountain of the Cascades," is about to discard its cloak of mystery for commercial raiment. Barring unforeseen interference with plans carefully formulated over a period of years and finally completed after numerous estimates on the various phases of the enterprise had been submitted by responsible scientists, engineers and government officials, next work season will see material and supplies moving up the rugged south-east trail and preparations preliminary to the erection of the towers for the tramway will actually begin.

Surveys for the tramway, checked and rechecked, show final stakes driven down the "Ridge of Rocks" on the south-east slope of the mountain - the most accessible trail to the summit.

Fumes Noticed Several Years Ago

Strong sulphur fumes emanating from crevasses on Mount Adams were noted many years ago by the late C. E. Rusk, and mentioned in his fascinating book, "Tales of a Western Mountaineer." J. E. Wang of Trout Lake, first to discover deposits on one of the north ridges a decade ago, succeeded some six years ago in interesting several men of this district in his find. Each year since then, time, money and persistent efforts have been expended on claims filed by two groups, working in harmony toward the same end.

Sulphur, also known as "brimstone," is not scarce, yet so varied and heavy are the demands for it that enormous quantities are used annually in the manufacture of sulphuric acid, explosives, bleaches for straw, silk, paper, etc. It is used for medicinal purposes, in photography, preservatives, fire extinguishers, fertilizers, disinfectants, vulcanizing of rubber and countless other ways. For use in the

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paper industry alone 150,000 tons of this element are shipped into the northwest states annually.

Considering this and the enormous tonnage of fertilizers used, the men interested in the local deposit continued their search. For several seasons all supplies were packed from the supply base at 6200 feet to the summit (12,307 feet) by men - a terrific grind.

Trip Up Mountain Difficult For Horses

Horses with packs could not negotiate the last precipitous thousand feet and return the same day. Neither could they survive the low temperatures of nights at the top without housing facilities. Moreover, it was maintained that horses could never make the summit with or without pack, but the discovery of a ledge at about 9000 feet, where a permanent shelter was established, made it possible for a Trout Lake man to systematically train animals for this work.

With no load the horses learned the trail and became acclimated by remaining nights at the "shelter."

Last year, for the first time, they accomplished the feat of climbing to the summit with allotted poundage. The horses carried riders to the top for the first time when Mr. and Mrs. Wade Dean of White Salmon and Mr. and Mrs. Harry Claterbos of Pendleton stuck to their mounts to the summit, although a single misstep along several thousand feet of the climb would have been just too bad for horse and rider. In the ascent, where the climb is extremely precipitous the horses rest on their knees until sure of the next step.

The digging of test-pits by pick-and-shovel method during the early efforts was most laborious, yet from the first results were encouraging. Occasionally the men, overcome by sulphur fumes, had to be hauled by rope out of the holes.

Results Encouraging From The Start

Startling as it was to find what appeared to be pure sulphur ore to a depth of 15 feet and more in such pits dug over the huge half a mile square of crater, the prospectors continued the search, desiring assurance of sufficient tonnage to justify the expense involved in getting into active commercial mining. Due to low temperatures in winter, terrific storms and heavy snows incidental to such altitudes, work seasons are short - four to five months. The first trip up each

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summer by ranger or others finds the forest service lookout at the summit buried in snow drifts.

Despite improvement of working conditions each year the prospecting has been fraught with trials. Last season, with horses making two and three round trips per week with load, to the top, from the original supply base at 6200 feet, a well-organized camp was established at the summit - 12,300 feet.

It sometimes happens that rugged-appearing men cannot stand the combination of hard labor and high altitude, but more often each work season finds members of former crews eager to tackle the job anew, for offsetting the discomforts have been awe-inspiring, unforgettable sunrises and sunsets, moonlight effects; on clear nights illuminations from a hundred cities and towns; the tremendous crashing of avalanches on the west slope; constant roar of unseen waterfalls known to plunge a thousand feet down the forbidding north slope.

Diamond Drill Aids Investigation

Last season some of the crew saw an elk silhouetted against the skyline well up on the east slope, but before a kodak could be focused the antlered creature whirled and disappeared among the crags.

Finding test-pit and tunnel methods inadequate to reach the conclusions desired, a diamond drill was laboriously elevated to the scene of action. Results of four and a half months of intensive drilling and prospecting over the great ice field were carefully studied for several months and checked by geologists of high standing who reported evidence of widespread mineralization by sulphurous compounds over the area tested.

The sulphur and related deposits were not formed during the last eruption, nor immediately afterward, but during the long period of calming down from the turbulence of eruption.

Due to the high temperature of emergent gases, water (steam) and the rocks at the base of the crater, the sulphur was, and still is, forced upward until contacting the ice mantle, where the low temperature causes the steam to condense. The sulphurous gases, seeking escape, move to the porous lava flows which dip away from the crater walls. The gases spreading into the porous beds under the glaciers and there solidify.

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Sulphur Found In Various Forms

The large outcrops of sulphur on Mount Adams are considered to be such crevasses completely filled with sulphur. Geologists predict that this deposit promises to be the producer of a large amount of sulphur, alum crystals and gypsum for a period of more than 30 years. One type shows sulphur in the solid crystal state; another is gray in color, powdery in form, "meal sulphur" and very pure. Nearly all show crystals of gypsum and alum.

Since the discovery of sulphur on this mountain a favorite stunt with visiting Alpinists has been to pick up large chunks of the yellow and grayish material and demonstrate to friends its purity by touching a match to a piece, watching the blue flame until the fumes become unpleasant.

The owners, with less than 40 per cent of the deposit explored, are convinced that further development of the property is justified. They have incorporated a company under the laws of the state of Washington as Pacific Sulphur Mines, Inc. Wade Dean of White Salmon, the president, and other officers of the new company are local men who have been active in the development of the project since its inception.

The company plans to start driving a work tunnel 1700 feet in length; to install a refining and grinding plant, establish necessary camps and equipment and build a tram approximately 11 miles in length, estimating it will take two seasons to complete construction and get into production. Present plans call for an operation of 125,000 tons per annum. The tram will have a capacity of 50 tons per hour and can handle 250,000 tons per year.

It is understood that the final survey for the tram follows lines approved by the forest service department and that methods of mining used will in no way detract from the beauty of the mountain.

This project will give the public access to the wonders of this little-known peak - "Mount Paddo" as the Indians called it, with its 480 species of flora - the highest of the 12 snow-capped mountains of the northwest and the only one from which the other 11 can be seen on clear days.

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One Photo:

A diamond drill crew on Mount Adams

Caption: Head of Adams glacier, where it breaks out of its Mount Adams crater at 11,800-feet elevation. A diamond drill crew is shown in the foreground. Mount St. Helens looms in the distance.