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REPORT OF REGIONAL GEOLOGIST

ON PETRIFIED FOREST NATIONAL MONUMENT

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ON MICROFILM

PETRIFIED FOREST NATIONAL MONUMENT

Petrified Forest is so well known, and the geology so thoroughly understood that it is unnecessary at this time to do little more than call attention to some of the more outstanding features.

The Forest includes over 90,000 acres, located about 20 miles east of Holbrook, Arizona on both sides of the Santa Fe railroad and of U. S. Highway 66. The geological formation exposed on the monument is the Chinle~~s~~ shale and sandstone. This shale is often highly colored in various tints and hues, the dominant colors being red, brown, black, pink, yellow, magenta, white, mauve and purple. So fantastic are the colors that the name "Painted Desert" is often applied to the area.

The Chinle~~s~~ formation throughout the area of its outcrop in Arizona and Utah, contains much petrified wood. But it is in the area included in the Petrified Forest that this material is most abundant. Myriads of petrified logs and stumps lie exposed on the surface. Some of the larger of these logs are 10 feet in diameter. Others are 160 feet long. Practically all are highly colored.

Six areas where these silicified logs are most abundant are known as First Forest, Second Forest, Third Forest, Blue Forest, Black Forest and Rainbow Forest. Three species of fossil wood have been recognized, all of them belong to the lower order of plants of which ferns and mosses are the modern representatives. No broad-leaved trees have been found. Bones of prehistoric reptiles and specimens of fossil shells also occur in the Chinle.

Under date of January 12, 1936, Associate Geologist Vandiver, submitted a comprehensive report on the Petrified Forest. This report was accompanied by a rather complete bibliography of the area.

The most pressing problem at this time is water supply. A well was drilled near the present headquarters, but the water is salty. All water for drinking and cooking is obtained from a shallow well at Pueblo wash and is hauled 16 miles.

The removal of the headquarters to the Rim overlooking the Painted Desert is contemplated. If this is done it will be necessary to provide a permanent water supply.

The most promising source would appear to be in the stream valley, or wash, some half mile west of the proposed headquarters. A well drilled for oil in this region known locally as the Zuni well is reported to have secured large amounts of potable water between 100 and 500 feet.

I consider it very likely that ample supplies of water for ordinary purposes can be secured from one or more wells drilled near this place. Water so obtained can be lifted to a reservoir located on a hill about 100 feet higher than the proposed building site and distributed by gravity. This well location is discussed in Mr. Vandiver's report.

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