

The State of Wyoming.  
Office of State Geologist,  
Cheyenne.

MR 1904-53

Cheyenne, Wyo. Oct. 29, 1904.

Mr. F. A. Sparhawk,  
Buffalo, Wyo.

Dear Sir:-

Enclosed please find brief report on the Top Hand Group of  
claims, examined at your request and which I consider a promising prospect  
for development.

Hoping you may be able to open up this property, I am,

Very truly yours,

*Henry C. Beeler.*  
State Geologist.

GEOLOGICAL SURVEY OF WYOMING

A B R I E F R E P O R T  
O N  
T H E T O P H A N D G R O U P,  
J O H N S O N C O U N T Y, W Y O M I N G .

L O C A T I O N .

The Top Hand Group of Claims is situated east of the Bull Camp Mine in T.47 N. R.84 W. about 40 miles south-east of Buffalo, Johnson County, Wyoming and near the southern end of the Big Horn range of Mountains.

O W N E R S .

This group is held by location and discovery under the Laws of the United States and the State of Wyoming by Geo. W. Mattox, F. A. Sparhawk, Alvin Bennett and Thos G. Smith, all of Buffalo, Wyoming.

G E N E R A L G E O L O G Y .

The Big Horn Mountains consist essentially of a huge core of granite flanked by the carboniferous limestones and succeeding sedimentary formations which dip at a varying angle and extend out under the great plains region on all sides.

This granite is usually of a reddish feldsitic variety with occasional exposures of grey granite and with the usual bands of gneiss and schist and some of the dark colored dyke rocks cutting the granite in some localities.

THE TOP HAND GROUP.

At this point the formation is a series of broad bands of granites, feldsites and schist, with an occasional black dyke rock showing at intervals. The schists are usually a coarse grained black mica or biotite schist and as a rule show considerable quartz throughout the mass.

The general trend or direction of the schist is north-west and south-east and dip to the north-east at a varying angle. These bands outcrop for a considerable distance east and west of the Top Hand Claim and are evidently covered up by the granite wash noted in the parks on either side of the Top Hand and adjacent ridges.

At a number of points on these bands are a number of mineralized outcrops and considerable quartz, the mineralization being usually a brown limonite or brown iron oxide and some green stains of carbonate of copper.

The principal showing is on the center of the Top Hand Claim on a low ridge which runs parallel with the strike of the formation.

Here a shaft has been sunk on a quartz outcrop in the schist and considerable promising ore taken out but it is believed the main ore contents is located on the contact of this schist and a huge feldsite dyke a few feet north of this shaft position and quartz out crop.

It is noted that the dip of the schists and the quartz vein matter and the stained material in the shaft, are all towards this contact north of the shaft, and it is strongly recommended that this contact be prospected by a few surface cuts through the wash and the point of the heaviest mineralization determined by this means.

Experience has shown wherever copper ores have existed in commercial quantity in this State, that they have lain in a contact between two distinct formations and have been covered with a heavy cap of iron oxides, both limonite and hematite.

When this point is determined as above indicated, a shaft should be sunk on the contact, following the ore or iron cap and be pushed to water level, where the nature of the underlying ore would be determined. It is probable this ore will be chalcopryite or copper pyrites suitable for concentration.

Owing to the nature of the ground this work can be done at a comparatively slight expense and without a plant of machinery until considerable depth has been reached and something of the permanent nature of the work determined.

As opportunity permits, it is suggested that other outcrops in this vicinity be prospected to determine the extent of the surface mineralization shown on this contact and others in the same band.

#### TIMBER, WATER AND SUPPLIES.

Timber sufficient for all mining purposes may be had within easy haul of the property and sawed lumber at the usual rates in inland locations.

Water sufficient for all present purposes may be had at the small creeks at the base of the Top Land ridge.

Supplies of all sorts may be had at Buffalo and good roads lead direct to the group:

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It is considered that the Top Hand presents a good development prospect and that the present showings fully warrant the prosecution of the work necessary to prove the property on the lines above indicated, with every reasonable expectation of success.

Respectfully Submitted,

*Henry C. Decker*  
State Geologist.

Date of Examination,

October 25th 1904.