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MR 907-85

GEOLOGICAL SURVEY OF WYOMING

A BRIEF REPORT

ON

THE MCCONNELL-BERRY & ALLEN GROUP.

NEAR

CASPER, NATRONA COUNTY, WYOMING.

—X—

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FROM OFFICE.

SITUATION.

Casper Mountain, on which this property is situated, is one of the principal landmarks of East Central Wyoming and lies a few miles south of the town of Casper and the North Platte River at this point.

Casper is reached by the Chicago and Northwestern Railroad from Cheyenne, Denver, Omaha and eastern points, and by the Wyoming and Northwestern Railroad from Lander and other western and central Wyoming points. This is a first class location for a plant and the shipping facilities are excellent.

This group is located in Sections 16, 17, 18, 19 and 20, Township 32 North, Range 79 West and in Section 33, Township 32 North, Range 80 West, in Natrona County, Wyoming, all as shown on the sketch maps of this property and vicinity.

EXTENT.

This group consists of thirty three lode claims as follows;

1. The Pendragon Lode Claim.
2. " East Slope " "
3. " Evening Star " "
4. " North Star " "
5. " Murphy " "
6. " Maverick " "
7. " Keystone " "

				2.	
				Lode Claim.	
8.	The Lone Tree			"	"
9.	" Isabella			"	"
10.	" Italia			"	"
11.	" Black Diamond			"	"
12.	" "	No. 2		"	"
13.	" "	" 3		"	"
14.	" "	" 4		"	"
15.	" "	" 5		"	"
16.	" "	" 6		"	"
17.	" "	" 7		"	"
18.	" Teddy Roosevelt"	" 1		"	"
19.	" "	" 2		"	"
20.	" Eagle			"	"
21.	" "	No. 2		"	"
22.	" Independent			"	"
23.	" "	No. 2		"	"
24.	" Allen			"	"
25.	" Spring Valley			"	"
26.	" Leadhill.			"	"
27.	" Morning Star			"	"
28.	" "	Fraction	"	"	"
29.	" Horocross	No. 1		"	"
30.	" "	" 2		"	"
31.	" "	" 3		"	"
32.	" "	" 4		"	"
33.	" Ridge			"	"

These claims comprise about 650 acres and are held by location and discovery under the laws of the United States and the State of Wyoming. Patents should be applied for as soon as convenient and the property accurately surveyed and platted!

#### GENERAL GEOLOGY.

Casper Mountain is the western end of the chain of mountains which extend north from the Colorado-Wyoming State line to Laramie Peak and thence west to Casper Mountain and the North Platte River. The eastern portion of this range consists of a core of granite flanked on either side by the limestones and succeeding sedimentary deposits, such as sandstones, gypsum beds, shales, etc..

At Casper Mountain, the limestones etc. show as a series of high bluffs and deep canons along the northern side of the mountain, and dip or slope towards the north and under the valley of the North Platte River,

on which Casper is situated, the dip becoming less as one goes north.

The granites which form the heart or core of this range east of Casper Mountain, are replaced (at this group) by serpentine, a greenish rock composed principally of the mineral "serpentine" and which is cut by black dykes at varying intervals throughout its extent.

These dykes ~~xxx~~ are principally diorite and there are other dykes noted at intervals, of granite and some schist, with some feldspar more or less altered and replaced by silica, showing as masses forming prominent outcrops in this vicinity.

This "serpentine Belt" as it is locally known, is apparently about six miles long easterly and westerly, and a mile or so wide, and in this serpentine is noted the asbestos which has occasioned this report.

#### ASBESTOS ON CASPER MOUNTAIN.

For many years the existence of asbestos on Casper Mountain has been known and while a great deal of shallow prospecting and surface work has been done at various times, no deep work has been attempted and the work done has simply shown that the asbestos is here present in great quantity over a very large area and the quality is undoubted.

The variety here noted is "Chrysotile" asbestos, a fibrous, greenish white mineral possessing remarkable heat, sound, and electricity non-conducting properties, capable of being worked up into cloth, wicking, etc. for the finer grades and for fireproof plaster, coverings etc. for the lower grades.

With the Chrysotile variety occurs quantities of the coarser or brittle varieties called Chrysolite, amphibole, fibrous talc, etc. but these are not considered at the present writing. Later, in working up waste material these may become valuable.

This chrysotile asbestos is found in the shear zones or cracks in the serpentine formation made by the crushing and breaking of the formation by the movements which have left the mountain in its present state.

These seams in some cases, extend over a belt one hundred feet wide, as nearly as may be now traced by the surface showings, and these zones generally extend along with the general trend or direction of the serpentine belt but may vary locally.

In these wide zones the small seams and cracks run in every direction and at every angle, forming a net work of small veinlets that vary in size from a mere thread to veins three and four inches in thickness and filled with chrysotile asbestos.

During the course of this examination, many samples were taken out of holes and the McConnell shaft, from fragments of rock on the dumps and worked up by hand, and showed an remarkable uniformity of fiber- regardless of length- and in many cases this material was taken from old dumps that had lain exposed to the weather for several years.

#### The McCONNELL-BERRY and ALLEN GROUP.

The claims composing these groups lie principally at the head of Falls Creek, the western portion lying at the head of Garden and Red Creeks. At the time of this examination, a great deal of the ground was covered with snow and a part of the property had to be visited on snow-shoes; this necessarily limited the ground to be seen and the work that could be done but it was plainly evident from what could be seen that asbestos of approved quality is here in commercial quantity and the development of these showings should begin at once.

The principal point accessible was the workings on the Evening Star claim, known as the McConnell Shaft. This is a shaft about forty feet

deep, sunk on the vein and showing the characteristic network condition before noted. Here the fiber shows from one-fourth and one-half an inch long up to a length of two inches and with the veins widening towards the bottom of the shaft. Instances were noted where the veins showed three or four inches wide but with breaking planes in the fiber at intervals, making a shorter fiber but of good quality.

At other holes and dumps on this group, similar conditions were noted and the asbestos found at these points indicated a great quantity of the mineral of uniform quality but the extent could not be determined at this time.

#### DEVELOPMENT.

As soon as the spring opens and the ground is clear of snow, the surface should be thoroughly prospected, the property accurately surveyed, all workings and outcrops located by survey and plotted, and arrangements made to begin active work at once.

The McConnell shaft shaft should be cleaned out, a hoist installed and the mining of the fiber there shown should begin at once, with a small mill to crush and make the coarser grades for the market.

The ground is favorable situated for economical mining and working and a careful survey should be made as soon as convenient, to determine the most suitable point for a mill and permanent works and also the best line for a tramway from the mine to the millsite and Casper, as well as a careful determination of the waterpower to be had at the falls of Falls Creek and other points nearby.

#### TIMBER. WATER ETC.

This group is well covered with timber and structural and mining timbers may be had here. Water for all purposes is plentiful and a plant for power as above noted, should be considered as soon as it may

become profitable for the operation of the plant and mine. Supplies of all kinds may be had at Casper, seven miles distant and laid down at the mine at low rates and this, with the close proximity of railroad facilities to all shipping points should be given all due consideration in the opening up and operation of this property.

SUMMARY.

This Asbestos proposition is considered to warrant the fullest investigation and that the showings now made justify the expenditure necessary to open up the property and put the finished product on the market.

Respectfully Submitted,

*Henry C. Decker*

State Geologist.

Date of Examination.

February 23-26th, 1907.

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