

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

A BRIEF REPORT

ON

The KADSVILLE-TRETFORD-MORNING DEW-KATHRINE GROUPS,

NEAR

CASPER, NATRONA COUNTY, WYOMING.

-4-

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 15, 16, 17, 18 and 20, Township 32 North, Range 79 West, in Natrona County, Wyoming, all as shown on the sketch maps of this property.

EXTENT.

The group consists of twenty three lode claims and three placer claims, as follows:

- |    |                 |   |             |
|----|-----------------|---|-------------|
| 1. | The Morning Dew | — | Lode Claim. |
| 2. | "               | " | (No. 1) " " |
| 3. | "               | " | " " 2 " "   |
| 4. | "               | " | " " 3 " "   |
| 5. | "               | " | " " 4 " "   |
| 6. | "               | " | " " 5 " "   |

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		No. 1	8.	Lode	Claim.
7.	The Kathrine	"	2	"	"
8.	"	"	3	"	"
9.	"	"	4	"	"
10.	"	"	5	"	"
11.	"	"	1	"	"
12.	Thetford	"	2	"	"
13.	"	"	3	"	"
14.	"	"	4	"	"
15.	"	"	5	"	"
16.	"	"	6	"	"
17.	"	"	7	"	"
18.	"	"	8	"	"
19.	"	"	9	"	"
20.	"	"	1	"	"
21.	Eadsville	"	2	"	"
22.	"	"	3	"	"
23.	"	"	4.	"	"
and,					
1.	Thetford Placer,				
2.	Eadsville	"	No. 3		
3.	"	"	" 4.		

These claims comprise about 885 acres in these groups, held by location and discovery under the laws of the United States and the State of Wyoming. Patents should be applied for at earliest convenience 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 end 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, here 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 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 quartz, showing as masses forming prominent outcrops in this vicinity.

The "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 that 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 or 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 left the mountain in its present state.

The seams extend in some cases over a belt one hundred feet wide, as nearly as may now be traced by the surface, 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 progress of this examination, many samples were taken out of holes, from fragments of rock on dumps and from veins in the shallow shafts and worked up by hand, and showed a remarkable uniform quality of fiber- regardless of length- and in many cases this material was taken from old dumps that had been exposed to the weather for many years.

#### Thetford-Morning Dew-Kathrine Groups.

These three form the western portion of this property and here most of the work was done. At the time of the 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 amount of work that could be done and the ground to be seen but <sup>enough</sup> was seen to make it evident that the asbestos of approved quality is here present in commercial quantity and development of these showings should begin at once.

On these groups, veins were noted showing asbestos from one-half inch to three inches in length, as well as a great quantity of shorter fiber, and the veinlets were traced in an open cut to a width of about ten feet at this point.

Other holes showed similar conditions but the best showings and the deepest workings could not be visited at this time for the above reason.

#### EADSVILLE GROUP.

This group is the eastern portion of this property and from all information and data now available is equal, if not better, than the above noted western groups but could not be visited on account of the snow which covered the ground to a depth of many feet at this time. A special report should be made on this ground later.

#### DEVELOPMENT.

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

The ground is favorably adapted for economical working and a careful survey should be made to determine the most available point for permanent works and the best location for a tramway from the mine to the millsite and to Casper, as well as a careful determination of the waterpower that may be obtained at the falls of Falls Creek and other points in this vicinity.

#### 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 outlined should be considered as soon as maybe convenient or profitable.

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 to all railroad and shipping points should be given all due consideration.

6.

SUMMARY.

This Asbestos proposition is considered to warrant the fullest investigation and that the showings 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 22-26th, 1907.

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