

A HEMATITE DEPOSIT ON PAT O'HARA MOUNTAIN, PARK COUNTY

Location and Ownership

The deposit is located on the east flank of Pat O'Hara Mountain in the SW $\frac{1}{4}$ sec. 9, T.54 N., R. 103 W. It may be reached from Cody by following State Highway 188 to the Two Dot Ranch. Turn southwest here and follow Pat O'Hara Creek for an approximate distance of three miles. At this point it is necessary to leave the car to climb, in a southwesterly direction, to the second hogback on Pat O'Hara Mountain. The hematite outcrops approximately 1400 feet above Pat O'Hara Creek in a small depression between the second hogback and the mass of Pat O'Hara Mountain.

The deposit consists of seven unpatented claims which are named, "Iron King Nos. 1 through 7," and are owned by Hervey G. Marvin, Cody, Wyoming.

The writer spent the days of September 10 - 11, 1952 examining the deposit.

General Geology of Pat O'Hara Mountain

Pat O'Hara Mountain is a large up-faulted anticlinal fold consisting essentially of Paleozoic rocks. Near the top of the mountain at an elevation of 9,000 feet is a remnant of the Heart Mountain thrust¹: On the east end, the Phosphoria, Tensleep, and Amsden formations outcrop as flatiron-like hogbacks with the softer red shales of the lower part of the Amsden forming a depression between the more resistant upper Amsden and upper Madison rocks.

Pat O'Hara Creek, initially a consequent stream, has eroded a small subsequent valley in the soft Triassic Chugwater formation on the east side of Pat O'Hara Mountain.

Mineralization

The mineralization occurs within the "red Beds" of the Amsden formation which strike N. 46°W. and dip 35°NE. at this point. The ore consists of three different types of hematite: "buckshot ore," hard, blue hematite nodules, and a soft brownish-red "paint rock" type of hematite. All of the ore occurs within a twenty-three foot zone. The following partial section of the Amsden formation was measured from the top of the second hogback:

Limestone, light brownish-gray, contains calcite veins and lenses and pods of blueish-gray chert	20'
Covered	20'
Mudstone, reddish-brown, contains many oolites and pisolites varying in color from brown to a blue hematite, the oolites and pisolites vary from 1 - 7 mm. in dia., median dia. is 2 mm., the oolites and pisolites weather readily from the mudstone matrix	2½'
Mudstone, reddish-brown, contains blue hematite nodules and pods of median dia. 2" scattered irregularly through bed. Lower two feet is a brownish-red "paint rock" hematite similar in color to the above-lying mudstone.	20'
Limestone, grayish-brown	3'
Mudstone, reddish-brown	4'
Covered	--
Total Thickness	69½'

Analyses of grab samples of the "buckshot" ore and the nodular and bedded ore furnished by the Natural Resources Research Institute are 45.60 % Fe and 47.60 % Fe respectively.

The deposit is reported to extend for a mile and one-half along the strike. The length of the deposit was not checked by the writer since the relative narrowness of the deposit precludes, in his opinion, any presence of a commercial iron deposit.

The deposit has reportedly been examined and rejected by the Colorado Fuel and Iron Corporation.

Reference

1. Pierce, W.G., "Heart Mountain and South Fork Thrusts, Park County, Wyoming, Bull. A.A.P.G., Vol. 25, No. 11, pp. 2021-2045, 1941.

Signed

William H. Wilson
William H. Wilson
January 28, 1953



THE UNIVERSITY OF WYOMING
COLLEGE OF ENGINEERING
NATURAL RESOURCES RESEARCH INSTITUTE
LARAMIE, WYOMING

December 31, 1952

Mr. William Wilson
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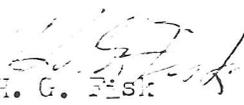
Dear Bill:

Results of iron analysis on the two samples which
you submitted some time ago are as follows:

Bedded and Nodular Ore	47.60% Fe
Buckshot Ore	45.60% Fe

Sincerely yours,

NATURAL RESOURCES RESEARCH INSTITUTE


H. G. Fisk
Director

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