

HOMESTAKE MINING COMPANY

LEAD, SOUTH DAKOTA

December 4, 1953

Dr. Horace D. Thomas
State Geologist
The Geological Survey of Wyoming
University of Wyoming
Laramie, Wyoming

Dear Dr. Thomas:

Dr. McLaughlin passed on to us your request for a short memo on uranium mining in Eastern Wyoming.

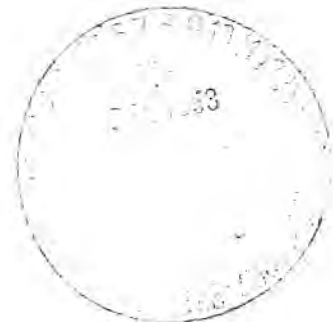
We enclose a brief memo prepared by our chief geologist, Mr. J. O. Harder.

Yours very truly,



A. H. Shoemaker
General Manager

AHS/btr



Homestake Uranium Operations in Wyoming

In May 1952 an airborne radioactivity survey made by the Homestake Mining Company in the Black Hills region found an important anomaly in an area about two miles south of Carlile, Wyoming in Crook County. Subsequent work by ground parties, based on the airborne anomaly, found good exposures of the uranium mineral, carnotite. Immediately, claims were located on open government land, and several thousand acres of private land were leased in the discovery area.

During the summer and fall of 1952 the deposit area was tested by wagon drilling, and mineable ore bodies containing more than 0.2 percent U_3O_8 were found. So far, no large ore bodies have been discovered.

The ore bodies occur in the upper part of the Lakota sandstone. They fill small fractures and porosity openings in a bed of medium coarse sandstone, which contains a good deal of carbonaceous, charcoal-like debris.

In January 1953 test mining operations were in progress. Trucking of ore to the Atomic Energy Commission buying station at Edgemont, South Dakota began and have continued throughout 1953.

A small crew of two to five men has been employed on the operation which is principally open pit work.

Prospecting was carried on in other areas of northeastern Wyoming during the summer of 1953 but ore has been produced only from the Carlile deposit.

JENKINS & HAND, GEOLOGISTS

P. O. BOX 1168
CASPER, WYOMING

December 3, 1953

Dr. H. D. Thomas
The Geological Survey of Wyoming
University of Wyoming
Laramie, Wyoming

Dear Bill:

Following is a summary of our operations during this year in the Powder River Basin, together with some comments on two other areas in the State where we have some interests.

During the past field season in the Pumpkin Butte Area of Johnson and Campbell Counties and in the northern Converse County Area, considerable airborne radioactivity exploration was carried out. A substantial number of anomalous areas were located, adding to those already found by the U.S.G.S., A.E.C., Kerr-McGee, and ourselves. Most of the airborne anomalies were ground checked and were found to be very weak to strong in radiation and from very small to fairly sizeable in area. In some areas mineralization was visible at the surface, in the rest no indication of the source of the radiation was detectable.

A number of the anomalies were explored below the surface by wagon-drill to a depth sufficient to penetrate the potential ore-zone and on a pattern designed to locate an ore body and then with decreased spacing, to outline it. Little or no drilling was done other than on known surface anomalies.

Although only a few of the anomalies were drilled, a number of ore deposits were outlined which were determined to be of commercial value by chemical and radiometric assay of the samples from the drill holes.

Dr. H. D. Thomas
Laramie, Wyoming

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One ore body in the Pumpkin Buttes Area was stripped of overburden, mined out, and shipped to the Edgemont, South Dakota, buying station. This venture proved to be profitable, even though mining costs were high due to experimentation of mining methods, and hauling costs were high due to the excessive distance to market. The success of this experimental operation influenced the decision to continue the mining of presently known deposits and to continue exploration both surface and subsurface when conditions will permit next Spring.

The Miller Hill Area of Carbon County, Wyoming, discovered or at least announced early this year by the U.S.G.S., and in which we have substantial holdings, has been investigated by us in only a reconnaissance fashion. Both the U.S.G.S. and the A.E.C. have had field parties in the area this summer. The results of their work have not been made available to us. At this time we do not know of the existence of any minable ore bodies in the Miller Hill Area.

The Area in eastern Fremont County and western Natrona County which has received so much poorly reported and somewhat exaggerated publicity recently was discovered independently by us prior to the publicity by airborne reconnaissance survey. Another group had previously found uranium bearing rock in a portion of the area. We managed to obtain fairly substantial holdings in the area before the press and radio reports brought in a horde of prospectors. The prospectors, both local and out of state, represented people from practically every walk of life, with a minority of responsible companies present. The flurry of claim-staking that followed the influx resulted in a kladoscopic pattern of overlapping and oddly shaped claims. To date we have done no detailed work in the area and only a minor amount of sampling and assaying. The assays so far indicate that there are present in the area scattered bodies of indeterminate size of commercial grade mineralization. The A.E.C. has drilled a few holes on another group's claims and have partially sampled the Area. We have had no reports on the results of their work.

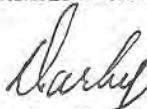
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Laramie, Wyoming

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We hope the above information will be of some assistance to you in your preparation of an article for the 1953 Mining Year Book of the Colorado Mining Association. If we can be of any further assistance please let us know. Best regards to you and your family.

Very truly yours,

JENKINS AND HAND, GEOLOGISTS



H. D. Hand

EDH:jg