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quartered out and run for iron, manganese, silica, phos, alumina, sulphur, calcium, and specific gravity. The purpose of this sample is to have a display to use in checking the market for lump ore in the steel industry and possibly as a source of heavy aggregate for the Atomic Energy Commission.

Bauxite - An extensive bed of clay is indicated in the trenches dug by N. A. Whittaker during the 1956 season. The clay is in place, not alluvial, and the structure indicates that it may be decomposed porphyry. This bed of clay was exposed at numerous places in shallow trenches by a prospector from Neihart, who is reported to be in the employ of the Anaconda Copper Company. Anaconda has an aluminum plant at Granite Falls, Montana, and it is possible they were checking this clay bed as a possible source of aluminum. It is reported that the prospector carried on extensive explorations on the north side of Iron Mountain where clays are exposed and it would appear that he traced this clay up into our Iron Mountain claims. This prospector requested the privilege of sampling the exposures of clay in the new trenches and he took samples of clay which had been washed from the sides of the trenches by recent rains and gathered as mud in the bottoms. The prospector also requested permission from Whittaker to drill the clays exposed in our Iron Mountain claims. Whittaker was not instructed as to whether or not to grant this permission.

The aluminum used in this country at present is practically all derived from bauxite. 73.5% of the bauxite used in 1953 was imported. It is possible that Anaconda is looking for a local source of aluminum ore to replace the imported bauxite. The clays recently developed in the Iron Mountain mining claims may be valuable as a source of aluminum and the subject is worthy of further investigation. It is suggested that the samples taken during the recent trip be tested for their aluminum content and amenableness to the production of aluminum.

The 1956 bulldozer trenches dug by N. A. Whittaker tend to reduce the probably extent and tonnage in the Iron Mountain deposit. Where, on first sight, there were apparently numerous outcrops of ore over a large area, the recent work indicates that many of these exposures were float. There is a band of iron ore across the Booth claims. At least hard lump ore is exposed over some 1,500 feet in various trenches and pits. The work on the deposit is not sufficient to prove that the band is continuous, east and west. We have little information on which to judge either the width north and south or the thickness of the iron formation. A magnetometer survey would seem to be the most logical procedure in the further exploration of these claims. It would give some indication of the extent of the orebody and trenching or drilling could be more efficiently planned. There are magnetite outcrops approximately one-half mile south of the outcrops on the Booth claims. surface exposures of ore tended to indicate a continuous orebody between the Booth claims and these most southerly magnetite outcrops. The recent work indicated that the surface exposures in

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the middle of the park were float. Therefore the geological relation between the outcrops in the north part of the park on the Booth claims and those in the south part on the Wage claims is problematical. This relationship might be developed by a magnetometer survey.

The value of the minerals in the area south of the Wage claim covered by the placer claim is questionable. Whittaker reports high radio-activity in this area. Sufficient work has been done on the Wage claims to carry the area for the time being but it would seem that the placer area should be investigated to determine its value before any further moves are made in that direction.

The purchase of the half-interest in the Twentieth Century and 1901 claims was completed and the deeds transferring the Booth interest to Grandt and from Grandt to Adams-Winston Western Syndicate were taken out of escrow in the First National Bank of Great Falls and deposited with C. E. Pew, an attorney of Helena. Mr. Pew has recorded both these deeds. He says that the title to the claims can be cleared in the name of Adams-Winston Western Syndicate because this is a joint venture conducted by Robert M. Adams, an individual, and Winston Bros. Company, a corporation, which is qualified to do business in Montana.

The other half of the Twentieth Century and 1901 claims is owned by a Mrs. Russell of Crystal Springs, Mississippi. Negotiations have been started to purchase this half interest. It has been decided that any action to quiet title will be held up until it is determined whether or not the Russell interest can be purchased.

Mr. Pew advises that undivided interests in mining claims in Montana are hazardous and dangerous. Any owner of an undivided interest can move in and start operations on any ground which is not actively being occupied by some other owner. Any owner of an interest can demand the delivery of his percentage of ore as it is delivered to the surface of the ground and pay only the actual mining costs of the ore. There are numerous other things which an owner of only a very minor part of a mining claim could do to create a nuisance.

CMP:mcb

CC: RMA, WBCo, CMP, File

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"No. 1 trench - Booth Claims"

Grab sample from bottom trench taken at 3-foot intervals over 110 feet of trench

Iron	52.08%
Silica	11.84%
Alum.	2.16%

1,000-lb. sample lump ore from old test pits and trenches

Iron	63.21%
Phos.	.049%
Mang.	.11%
Silica	5.30%
Alum.	2.02%
Sulphur	
Ca.O	
MgO	
Spec. Gr.	4.34