

REPORT ON
MANSFIELD GROUP MINING CLAIMS

Leadville, Colo.

by

H. G. McCloin

LIBRARY
COLORADO SCHOOL OF MINES
GOLDEN, COLORADO

In Re Mansfield Group.

Mr. W. A. Hennessey
Leadville, Colo.

You have requested that I write you, setting forth the data available regarding the Mansfield Group of Mining Claims owned by you and your associates. I have not visited the property as the depth of snow precludes any examination at this time, and there is little to be seen on the surface even in the Summer. I have studied over the available geological maps and have talked with many old timers regarding the property and its history.

This is not intended to be an engineering report and it must not be so considered. I believe the sketch map to be fairly accurate, and the data regarding the property has been checked by discussion with several old and experienced miners. I believe this information to be dependable, although second hand. There can be little question of the general features of the geology, as these are taken from the maps of the U. S. Geological Survey. I am merely setting forth such information as I have been able to gather without attempt at embellishment or exaggeration.

The Mansfield Group, as stated by you, includes the following seven Mining Claims on which U. S. Mineral Patent have been granted,-

Mansfield, U. S. Sur. No. 953	
St. Joseph, " 746	
Kankakee, " 956	
Castle, " 957	
Siberia, " 1554	
Acturus, " 3453	
Little Dot, " 9444	

Arcturus

These comprise a compact group embracing about 51.5 acres. I have shown this group of claims on the sketch map in outline. The Mansfield Group lies on the southern or Iowa Gulch flank of Printer Boy Hill and extends from the top of the hill to and across the flat basin of the gulch. It adjoins and is cut into by the Printer Boy, U. S. Sur. No. 45, which is the first claim to go to patent in the Leadville District.

The claims of group were located in the early boom days of Leadville, and had some shallow production in the early eighties. In the nineties the big shaft was sunk to the lime (here lying some 700 to 900 feet below surface) and development work begun to the East and West of the shaft.

Mr. Ellis Webster of Leadville, who was one of the two men working on the last shift in the Mine, describes the Mine thusly; the shaft was sunk 740 ft. to the shale contact; over the lime (between the lime and the capping white porphyry) and enough deeper to provide a sump. Two drifts were extended, one bearing westerly and into the hill, the other easterly, and into the hill. He does not know the exact direction of either. The drift to the West followed the lime-porphry contact for about 140 ft., the floor being blue lime, the back or roof blocky reddish porphyry. The contact showed some value and was being followed in the expectation of encountering ore. The easterly drift followed the contact also for about 120 ft., where a promising prospect was encountered, and the drift turned to a northerly direction to follow this, going some 30 feet further. The back or roof near the breast showed rotten porphyry with cube iron, and was very loose and heavy, requiring close timbering. On the last shift in the mine, Mr. Webster had started to shovel the broken rock back from the breast of the drift when he noticed a small stream of water. It quickly grew in size as it washed through the rotten porphyry and was soon flowing a heavy stream. He became alarmed, ran back to his partner and they went to the shaft, getting away ^{on} the cage just as the water floated timbers to the shaft. No one has been in the mine since. The shaft is a fine, three compartment shaft, especially well timbered.

This description was verified by Mr. Tim Riley, now and for many years past the lessee on the Lillian, which lies just East of the Mansfield, and by others.

The geological structure of the Leadville District is a normally flat series of Cambrian Quartzite, White Limestone, Parting Quartzite, Blue Limestone. Into (and overflowing) this series porphyries have been intruded, cutting through the sedimentary beds and spreading out in sheets into them, in every conceivable shape and manner. The heaviest porphyry flow is the White Porphyry which covered the entire sedimentary series to a depth of 500 to 1200 feet. Subsequent to the intrusion of the porphyries, the area was folded and faulted, until the sedimentary rocks now stand at any angle from flat to nearly vertical, and at any depth from actual outcrop to 1500 feet.

In the Leadville District, the ores occur in fissures to a limited extent only, more generally as extensive, flat lying replacement ores along and spreading out from the faults or fissures in the limestones. The strongest ore bodies are adjacent to or near to the porphyry sheets which have cut through and overflowed the limestones. Ore is found by prospecting the "Contacts" (planes dividing a strata of limestone from a sheet of porphyry), especially along minor faults, fissures, water courses or dikes of porphyry. The ores were deposited originally as sulphide ore containing gold, silver, lead, zinc, copper, iron, and manganese minerals in varying proportions. Subsequent action of surface waters and exposure to air have oxidized and changed the character of the ores close to surface, but below about 300 feet only sulphide ore is to be anticipated.

Geologically, the Mansfield Group lies immediately West of the intersection of the Pilot and Mike Faults--two of the major structural faults of the Leadville District. To the East of the Pilot Fault, the normal Blue Lime is close to or at surface, and the Lillian Mine has had a large production of ore from the upper layer of the Blue Lime and from the intercolated sheet of porphyry, and is now being worked on lease. The Printer Boy had two shoots of "picture" ore on a vein in the gray porphyry, a little to the North of the Mansfield. To the West and Northwest lie the big producing Mines of Rock Hill and California Gulch, the Dome, Stevens, Mike, A. Y. and Minnie, and the Moyer. The latter lies in almost the same relation to the Mike Fault that the Mansfield does, and presents almost the same general geological features. In all of this latter group of mines the ore bearing limestones lie at some 500 to 1000 feet below surface overlain by the thick sheet of white porphyry.

The local geology is not unusual, nor complicated. To the east of the Mike-Pilot Fault, the sedimentary rocks have been faulted to exposure at the surface, showing the normal limestones with intercolated sheets of white porphyry and crosscutting dikes of grey porphyry. One of these dikes has come up near the outcrop of the Mike Fault and spread out at surface covering the wedge between the two faults and extending into the Mansfield Group west of the Fault. This latter tongue of porphyry has not been explored nor carefully mapped. It shows on the U. S. G. S. maps as a vertical dike mushrooming out at surface, but its extent and dimensions are not known. I have mapped it as going half way across the Mansfield Group, but it may extend much further. The remainder of the area is covered with white porphyry under which the sedimentary rocks undoubtedly occur in their normal position, lying fairly flat but with a slight dip down to the east. Near the Mike Fault they are probably turned to a steep westerly dip (directly reversed from the mapped position on the other side of the fault). That there are several sheets of porphyry intruded into the limestones is indicated by the conditions east of the fault.

My conclusions and opinion after study of the maps and data available are:

1. I find no indication of any condition that would inhibit or limit the normal ore deposition in this ground.
2. I conclude that the limestone strata are in the normal condition for ore deposition, being cut through by and capped with porphyry, fissured and faulted, and should contain bodies of ore similar in grade and min.

3.

eral content to the ores mined in the vicinity.

3. With a good shaft--adequate for any Leadville Mine--the cost of development should now be very reasonable.
4. The water can surely be pumped out of the mine for small expense with the modern equipment now in use here, many Mines here having been unwatered where the conditions were many times as bad as those on the Mansfield.
5. Power lines and two good wagon roads pass within a few feet of the property, timber is abundant and convenient, and the situation is such that economical operation can be maintained throughout the year.
6. With the recent developments in Milling, the miner can now be sure of a market for sulphide ores of both smelting and mill grades, no matter how badly mixed the minerals may be.

In general, while no one can guarantee ore in advance of exploration, I believe that the conditions on the Mansfield are such as to warrant the unwatering and exploration of the Mine in the full expectation of developing a profitable enterprise.

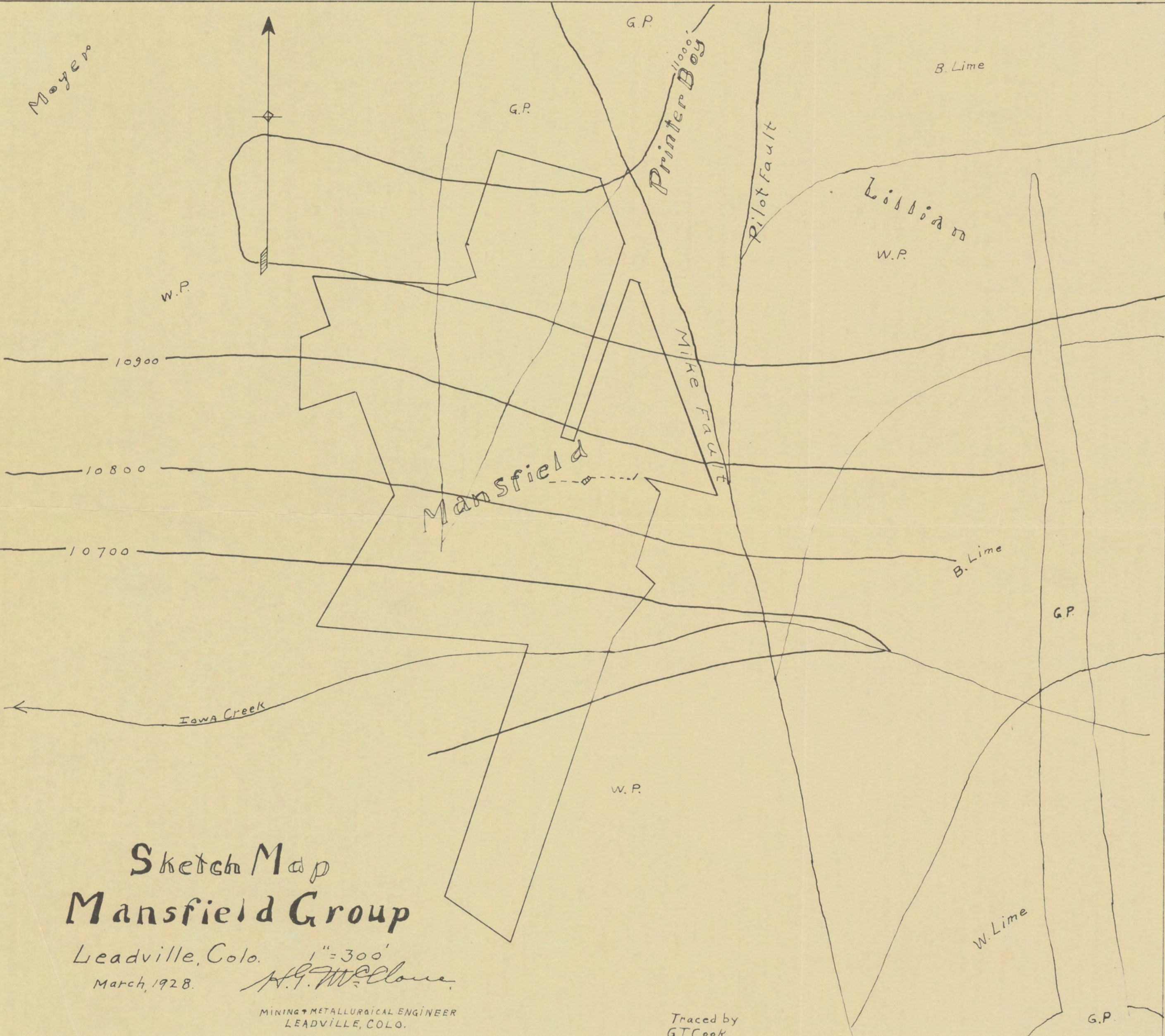
Respectfully,

(Signed) H. G. McCloin,

Mining Engineer.

LIBRARY
COLORADO SCHOOL OF MINES
GOLDEN, COLORADO

Moyer



Sketch Map
Mansfield Group

Leadville, Colo.
 March, 1928.

H. T. McCune

MINING & METALLURGICAL ENGINEER
 LEADVILLE, COLO.

Traced by
 G.T. Cook.

G.P.