

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

September 19th, 1907.

Mr. L. Cavnah, President,
Winona Gold Copper Mining and Milling Company,
Denver, Colorado,

Dear Sir,

Complying with your application of September 3rd last, I hand you herewith brief report on the property, operated by your Company, in Northwestern Wyoming.

SITUATION.

This property is situated on Sulphur Creek, on the eastern slope of the Stinking Water Range and Peak, in what is known as the Sunlight Copper Mining District, in the north-western part of Big Horn County, Wyoming and about fifty miles north-west of Cody, the nearest railroad point, where the Cody-Toluca branch of the Burlington Route now terminates.

EXTENT.

Complying with the recommendations in the previous report, the properties of the Winona Company have been carefully surveyed by Messrs. Kimball and Taylor, Civil and Mining Engineers of Cody, Wyoming, and the entire group accurately platted. Copies of this map have been furnished this office, and are on file with this report. For the names of claims and present extent of group, all are referred to this map. The claims comprising this group are held by location and discovery, under the laws of the United States and the State of Wyoming.

GENERAL GEOLOGY.

The formations in the vicinity of Stinking Water Peak consist of Andesites, rhyolite, trachites, porphyry and allied rocks, with some

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of the lava rocks showing at various points in the outlying portions of the mineralized area, but as far as now shown, all the mineral values are confined to the first named rocks. Some granites are also noted and the sedimentary formations, limestones, etc are shown east and south of the district.

Dykes of many varieties of rocks, and varying in size from a thin stringer to huge intrusions, many hundreds of feet in thickness and veins of quartz and lime material are frequently noted, and many of these are heavily mineralized, copper being the principal mineral with gold and silver.

SULPHUR CREEK

Sulphur Creek heads at a point south and east of Stinking Water Peak in a great amphitheatre formed by the lesser ranges connected with the main peak and the whole forming a narrow valley with the high mountains rising abruptly on either side to a height of 1500 feet above the creek and with steep slopes showing an angle of 40° in some places.

The Creek runs at a steep angle for its whole length with frequent water falls and cliffs furnishing abundant opportunities for power plants at numerous points.

THE WINONA GROUP.

The territory covered by this group lies on both sides of Sulphur Creek, beginning about two miles above the mouth of the Creek and extending irregularly for about a mile up the creek, as per map previously noted.

The formation is principally andesite with dykes and sheets of allied rocks of varying size and extent, and it is further noted that all the mineral showings so far investigated in this locality, appear to be at or near the contact of these intruded dykes or sheets, and the prevailing rocks of their locality.

At a point on the Malachite Claim this condition is noted and at this point an open cut has been made on a showing of copper glance and some very high grade ore taken out. The vein matter at this point is about six feet wide, including a streak of high grade copper glance of varying width, but as it is only about under cover, the real ore conditions are not yet shown, and must be determined by the tunnel below.

Since the last report, a vigorous prospecting of the surface has been carried on, with the result that a number of promising ledges have been discovered and enough work done thereon to prove the existence of the ore at these points.

These veins show practically the same conditions as the Malachite and other veins of this locality, and have indicated a greater extent of the mineralisation of these dykes than was first expected. The value of these ores is shown by the mill runs and assays, which are a part of this Company's records.

One of the principal showings is known as the "Bluff" vein and is traced along the high bluff on the north side of Sulphur Creek. It shows a series of veins and stringers running with the dykes and also cutting them at a varying angle, but the whole more or less connected, and evidently forming a network of veins in the enclosing andesite and trachite rocks. These vary in size from a foot or two wide to twelve or more feet in the larger veins, and it is evident that these are but a part of the veins to be found in this section of the group, which will be cut by the tunnel now being driven below.

MAIN TUNNEL.

This tunnel is being driven to cut the veins shown by surface work above and below the Malachite vein, and now forms the most important work under way.

It is being driven as a 5 X 7' working tunnel, and until recently

hand labor was employed, making progress necessarily slow, but the following mechanical plant has been installed and rapid work is being done.

- 1- Fairbanks-Morse 12 H.P. Vertical Gasolene Engine
- 1- " " 6" X 6"- 25 R.P.M. Air Compressor
- 1- Reservoir for same
- 1- Receiver for same 36" X 96"
- 1- Pump
- 1- Water Tank 6' Diameter
- 2- Sinclair Air Hammer Drills
- 1- Sinclair Drill Sharpener

Piping and tool outfit complete.

Work here shows that 10-3 $\frac{1}{2}$ ft. holes are drilled and fired in four hours and the cost of running the engine is about 54¢ per gallon of gasolene; one gallon being required per hour when drilling.

It is considered that this plant is well adapted for the work required and the most economical plan of driving the tunnel. This tunnel has reached a present length of 246 feet and is moving ahead at a good rate daily.

A log engine house, 16' X 30' has been erected at the tunnel entrance, with adjacent blacksmith shop 12' X 12'.

DEVELOPMENT.

It is recommended that this tunnel work be made the main work, and that it be pushed with all possible speed, as the showings in the face of the tunnel at the time of this examination, indicated a change in the formation and the cutting of the first of these veins within a short time. As far as can now be determined, this will be the vein, known as the "Greenhorn", being shown by exploration made above the tunnel.

It is considered that the showings now made by the surface work and the tunnel have confirmed the statements of the previous report, and that the active development of the property, as above outlined, is more than warranted by these new ones.

GENERAL CONDITIONS.

These are favorable for economical mining. Water power, timber and deep sites for tunnel work all contribute to this end, and the question of roads and transportation will be readily solved, when once the ore bodies are opened by the tunnel.

Climate is usual climate of the higher mountain altitudes, ranging from about 7200 feet at the mouth of Sulphur Creek to 8400 feet at the Winona Camp and 10000 feet above sea level at the upper Malachite cuts. Work will naturally be confined to the lower tunnels for extensive works and here no difficulty need be experienced in equipping the mine and handling the products.

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It is considered that the years work on the Winona has put the property in shape for active and economical development of the ores now shown, and that the expense of the fullest proving of these ores is fully warranted, with every indication that this will become a producer of commercial copper ore.

Respectfully Submitted,

Henry C. Beeler.
State Geologist.

Date of Examination

September 9th, to 14th, 1907.

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September 29, 1960

Memorandum to Bill Wilson:

On September 27 a Mr. R. H. Little, who gave his affiliation as the Skyline Corporation, 464 South Gilbert Street, Powell, Wyoming, stopped in to see us.

He told me that his concern, which is a Wyoming corporation, has been doing development work in the Sunlight Basin for the past four years. They have 4,361 acres and have constructed a ^{cheap} road back to the main copper deposits. The main ore body, he says, lies on a prominence which they call Horseshoe Hill which lies between Sunlight Peak and Stinking Water Peak. This has been interpreted, he says, by visiting geologists of mining companies as an intrusive body. Some of the visiting geologists have been Fred Howell, John Borsher of Butte, Montana, and Charles Goddard, Chief Geologist, Great Bear Exploration Company.

They have run a tunnel 316 feet long on the 600-foot level, and the average assay shows 1.62 per cent copper, 0.38 per cent gold, and 0.92 per cent silver. I think my notes may be confused regarding the gold and silver, and those may be cents rather than percentages. According to Borsher, and I think he said Borsher is associated with Anaconda, there is an estimated 23,000,000 tons of low-grade copper ore in sight.

In addition, they have exposed a high-grade chalcopyrite vein $7\frac{1}{2}$ ft. wide for a distance of 213 feet along the surface. He showed me a nice specimen which reportedly came from this vein.

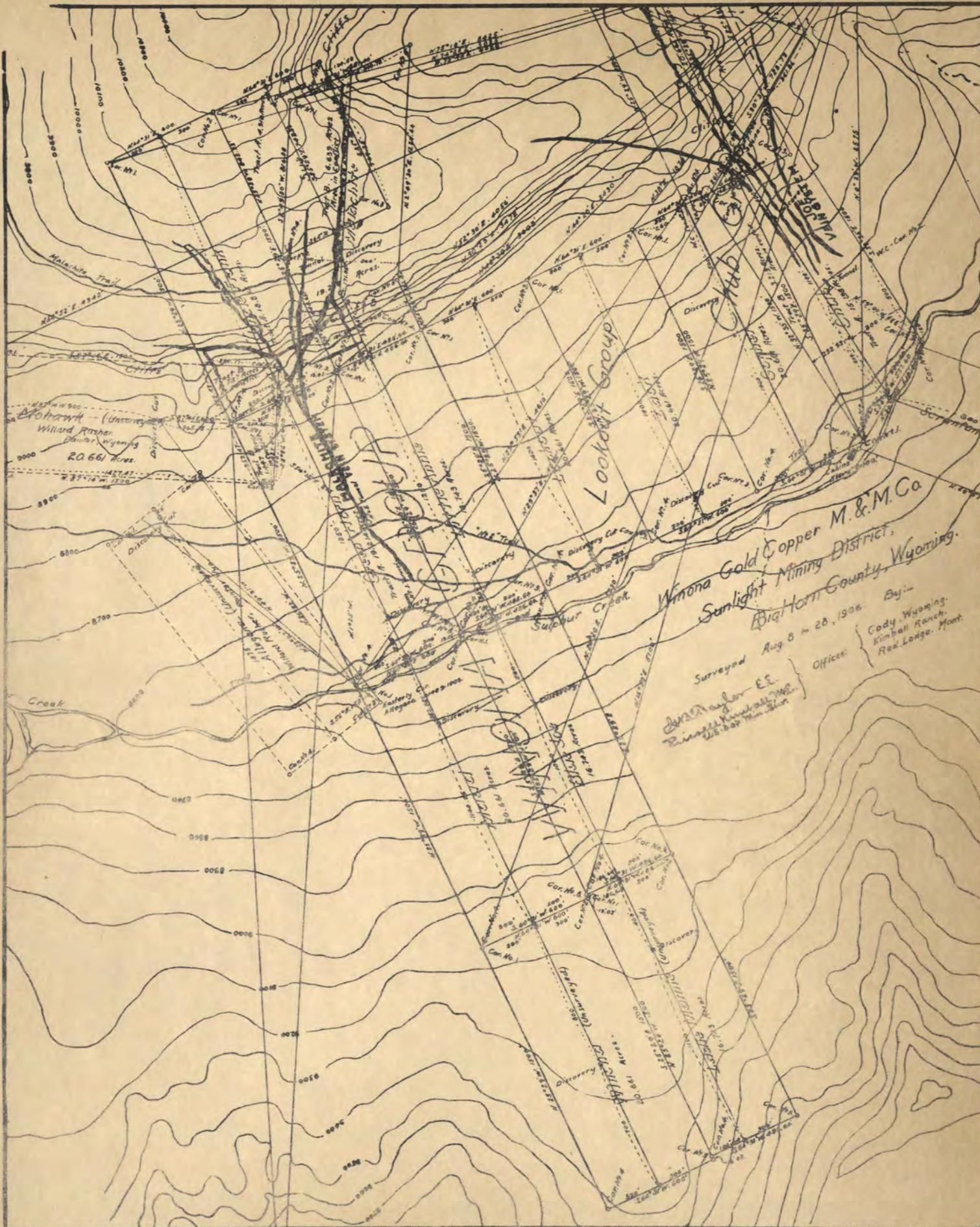
In addition, they have cleaned out the old Winona tunnel, which is listed in our Bulletin 50, and it is completely open for inspection.

He says that he expects to close a deal this week with Phillips Petroleum for further development and production, and that they anticipate doing considerable core drilling on the large low-grade body.

He also told me to tell you that he has obtained all the old records, correspondence, cash books, etc., of J. H. Schnitzel which pertain to the operations of the Galena Ridge and Shoshone Mountain Mining Company during the early part of the century. These were obtained from Schnitzel's son who resides in the Black Hills and, according to Mr. Little, these records aggregate quite a large file of documents.

Rich Dunrud knows him, and upon inquiry, Rich remarked that he felt that Mr. Little was sort of off in the clouds, but Rich knows nothing of his reliability and integrity. His main interest while here was to consult in the library the paper on the ore deposits of the Sunlight mining district by W. H. Parsons in Economic Geology. I pass this information onto you for what it is worth. Perhaps sometime when you're in the general region you might want to contact him or maybe look at the developments.

HDT



Lookout Group

Winona Gold Copper M. & M. Co.
 Sunlight Mining District,
 Big Horn County, Wyoming.

Surveyed Aug 8 to 20, 1906. By: [Signature]
 Office: Cody, Wyoming;
 Kimball Ranch;
 Rex Lodge, Mont.

Bohannon - (Unsurveyed)
 Willard Ranch
 Blaine, Wyoming
 20661 Acres.